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OFFICE OF NATIONAL RECOVERY ADMINISTRATION

DIVISION OF REVIEW

THE FERTILIZER INDUSTRY STUDY

VOLUME I

By

Al F. O'Donnell

WORK MATERIALS NO. 63

INDUSTRY STUDIES SECTION
March, 1936

OFFICE OF NATIONAL RECOVERY ADMINISTRATION

DIVISION OF REVIEW

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FOREWORD

This study of the Fertilizer Industry was prepared by Mr. Al F. O'Donnell of the Industry Studies Section, Mr. M. D. Vincent in charge.

This study provides a review of the production, distribution and employment conditions in the fertilizer industry. The objectives of the applicable provisions in the code have been indicated and their effectiveness in accomplishing these objectives have been indicated. Where the code fell short of its objectives, the reasons have been analyzed. Where particular types of code provisions worked well in the operation of the fertilizer code, the reasons for such success have been explored.

The NRA files contained the bulk of the information from which this study was made. Publications of other governmental agencies such as the Department of Agriculture, Bureau of Mines, Department of Labor, Federal Trade Commission, Department of Justice, Treasury Department and the Department of Commerce were also extensively utilized. Trade Associations, such as the American Potash Institute, Inc., and The National Fertilizer Association, Inc., were helpful in contributing material.

The author's position is that the NRA experience with the code for the fertilizer industry indicates that industrial legislation, such as the NIRA is practicable under certain conditions. The fertilizer industry was sufficiently well organized and experienced to know its own problems, and what code provisions would be of service in solving these problems. The National Fertilizer Association had personnel experienced in administering previous codes of fair practice under the Federal Trade Commission so that the administrative work of the fertilizer code was handled with a minimum of NRA assistance. Operating during a period when the demand for fertilizer was much greater than in the immediate pre-codal period, the fertilizer code contributed to the stabilization of the fertilizer industry, the spread of employment and the increase of wages, and the placing of the industry on a profitable basis with a relatively moderate increase in prices to the consumer.

At the back of this report will be found a brief statement of the studies undertaken by the Division of Review.

L. C. Marshall
Director, Division of Review

March 6, 1936

SUMMARY

The Farmer the Sole Consumer of Fertilizer

The peculiar problems as well as the importance of the fertilizer industry are attributable to the fact that it has only one customer -- the farmer. Fertilizers are used to replenish or supply plant food deficiencies in the soil, so as to improve the yield and quality of crops. The farmer's demand is highly seasonal and relatively inelastic in response to price, depending primarily on his own income in the preceding year and to a lesser extent on his credit facilities. The industry's problems are rendered more acute because a large proportion of the fertilizer is used on a few crops such as cotton, tobacco, potatoes and truck crops.

Only one-third of the farmers of the United States use fertilizer, since not all soils need additional plant food and some lack the water without which fertilizer is ineffective. Fertilizer is mainly used along the Atlantic Seaboard and in the Old South, where the soil has been depleted by the system of cropping. Fertilizer is a heavy material with low specific value; and high freight rates have caused the concentration of a large percentage of the plants in the main consuming areas.

Statistics of the Industry's Importance

In the last fiscal year some 6,200,000 tons of fertilizer were sold, with an estimated retail value of $158,500,000. The Industry, in 1933, the last Census year, employed an average of 13,063 wage earners, with an annual payroll of $7,274,000. For the ten Census periods since 1909 the averages have been 18,969 wage earners and $14,846,000 annual payroll. The peak was in 1919, with 26,296 wage earners and a payroll volume of $25,363,132.

The heaviest demand for fertilizer comes in the planting season, and a large percentage of shipments are concentrated in a few Spring months. The seasonal peak has been growing more acute over a period of years. In 1919 the minimum monthly employment was 54.9 per cent of the maximum; and this has steadily declined until at the last Census of 1933 it was only 32.8 per cent. The peak of employment occurs in March or April and the minimum employment is usually in June.

Types of Plants

The industry as defined by the code comprised several different types of plants, each of which had different problems. The smaller firms purchase all their materials and merely mix them. In numbers these constitute 772 of the 968 plants engaged in the business. Approximately 196 plants are engaged in the manufature of superphosphate, one of the constituent raw materials in most fertilizers. About 100 of thes plants manufacture the sulphuric acid necessary for their production. These superphosphate and acid plants require a relatively large capital investment, and the acid plants are run continuously all year.

Productive Capacity

The farmer does not anticipate his fertilizer requirements by advance purchases, because of lack of money, inadequate storage space or

fear of deterioration of the product. This increases the seasonality of production for the manufacturer, since he does not wish to carry heavy inventory and to speculate in the raw materials that constitute over 60 per cent of his cost. Thus the dry mixing plants usually have a capacity which will take care of the peak demand. Statements regarding the excess productive capacity of these plants and of the industry, therefore should be subject to careful scrutiny.

For firms which manufacture superphosphate productive capacity is largely a matter of sufficient capital and storage space, since sulphuric acid can be purchased in the open market.

Principal Price Factors not Controlled by Code

The predominant factors in the price of fertilizer were not controlled by the fertilizer industry code. In 1934 raw materials represented 62.3 per cent of the total cost of the manufacture of mixed fertilizer, and bags or containers represent an additional 7.5 per cent. The drop in fertilizer prices over a period of years has been due not so much to improvements in production or distribution as to variations in the prices of these raw materials, resulting from their increased world output.

The leading nations have sought to obtain national self-sufficiency with reference to fertilizer materials, not only because of their war time value for increasing crops with a smaller amount of labor, but also because the nitrogen materials are the basis of explosives and of chemical warfare. The United States, while formerly dependent upon foreign countries for potash and for a large percentage of its nitrogen needs, could today in an emergency supply the entire requirements of the fertilizer industry with domestic production. This is due in large measure to the development of the processes for the fixation of atmospheric nitrogen and to the discovery of great potash deposits in New Mexico. We still import large tonnages of fertilizer materials, however, and their prices are set in world markets, since there is no import duty.

Interstate Aspects of the Fertilizer Industry

The distribution of fertilizer materials furnishes an excellent illustration of interstate commerce. The sources of these materials are highly concentrated geographically. Potash is either imported or comes from New Mexico or California. Phosphate rock comes primarily from Florida and to a lesser extent from Tennessee, and is made into superphosphate by using sulphuric acid, the sulphur content of which is largely imported pyrites or is derived from the Texas or Louisiana deposits. These materials are distributed to fertilizer manufacturers, and through them in the form either of mixed fertilizers or without mixing, to farmer consumers in practically every state of the Union.

Impact of the Depression

Competition for the farmers' fertilizer business is always keen; but in years following a decline in agricultural income each producer of mixed fertilizer has been tempted to utilize every method of com-

petition in the effort to maintain his volume of business. This has produced a state of competition from which so-called unfair trade practices resulted.

Unfair Trade Practices

Many of these practices had to do with methods of price cutting, of which the most serious was perhaps the guaranteeing of prices against decline, not only as to a seller's own prices, but also as to those of competing producers. This was especially serious because a large percentage of fertilizer sales were made on a credit basis, due to the farmer's inability to pay until he received the proceeds of the crop on which the fertilizer was used. The farmer's settlement at the end of the season was based upon the lowest price at which any producer had offered him that particular grade during the preceding season. Variations in quality were often ignored, and the sale of a very small tonnage at a low price late in the season, by some producer who had not been able to move his inventory, caused heavy losses to the Industry as a whole.

In many instances retroactive settlements were made on cash sales, if at the end of the season prices had declined below those which a particular farmer had had to pay. Competition often resulted in the unwise extension of credit to the farmer, and large industry losses resulted. Price cutting by rebates and trucking allowances, or by offering a multiplicity of grades which deviated only slightly from the standard, were also extensively utilized as price cutting vehicles.

Industry's Code Experience Prior to NRA

The industry had had three or four so-called codes of fair trade practices prior to NRA. The last of these codes had been approved by the Federal Trade Commission in 1929 and had been abandoned in 1932, because of the demoralized condition of the industry. Due to the drop in the farmer's purchasing power the sales of fertilizer were only 4,400,000 tons in 1932, as contrasted with 8,200,000 tons in 1930; and the resulting scramble for business led to wholesale violation of the code.

Labor Conditions Prior to NRA

Up to the time of the NRA the industry had never given any consideration to raising the level of competition as regards labor standards. Measured by any standard wages were low, and working hours were abnormally long. Employees in many plants worked as long as 84 hours per week, with 50 hours the average in the busiest month of 1933. Some Southern plants paid as low as four or five cents an hour for common labor. The average wage from January to June, 1933, in the United States was 21 cents per hour, with common labor in dry mixing departments receiving an average of 16.9 cents.

In 1933, with fertilizer selling at a price below the cost of production, the tonnage increased only about 400,000 tons, thus illustrating the inelasticity of the farmer's demand. The corporate income tax returns made to the Treasury Department show losses in excess of profits of $10,757,077 in 1931, $8,057,105 in 1932, and $2,474,256 in 1933.

THE FERTILIZER INDUSTRY CODE

The NRA fertilizer code contained provisions designed to raise the level of competition both as regards labor standards and as to the methods of doing business.

Labor Provisions

Labor, which represented only from five to eight per cent of the total cost of manufacturing mixed fertilizer, was not a serious cost factor. The industry, therefore, readily adopted labor standards which, while not high compared with those of some other industries, nevertheless represented a marked advance over the abnormally low ones that had prevailed prior to the Code. Workers were limited to a maximum of 40 hours per week, with certain exceptions; and the minimum rates of wages were fixed at 25 cents per hour in the South, 35 cents in the North and Middle West, and 40 cents on the Pacific Coast.

Trade Practice Provisions

As a base from which to measure price cutting, the Industry had a clause prohibiting sales below cost except to meet competition. The most important provision of all, however, required the filing of open prices, with a ten-day waiting period before a revised schedule became effective.

Code Authority

The Code Authority was a body appointed by The National Fertilizer Association, a trade association judged by the NRA to be truly representative of the industry. The Code Authority and many of those to whom they delegated authority were men experienced in administering this industry's previous codes of fair trade practices, such as the one approved by the Federal Trade Commission.

Code Compliance

An excellent compliance record was achieved by the Code Authority, which handled 1334 cases of trade practice complaints and 90 cases of alleged violations of the labor provisions of the code. Fewer than 20 of the trade practice complaints were referred to the NRA.

Code Never Reopened for Amendment

Several provisions which it would have been desirable in the public interest to include in the fertilizer code, to bring it into line with NRA policies developed after the original approval, were never incorporated, even though the industry would not have objected to them. The difficulty lay in the fear of the industry that a reopening of the code might deprive the industry of privileges already embodied in it, such as the ten-day waiting period on open price filing which was considered to be essential for successful operation.

RESULTS ACHIEVED UNDER THE CODE

The Code Contributed to the Industry Stability

The code was successful from the viewpoint of the Industry and contributed to its stability. Another factor which contributed to the improved Industry position was the sharp upturn in the farmer's purchasing power that developed during the codal period. Other important factors were the removal of legal restrictions that had been hindering the cooperative efforts of the industry; the fact that the Code was well adapted to the industry's needs, as a result of previous experience with similar instruments; the trained personnel with knowledge of the industry and with experience in administering codes; and the location of the executive offices of the trade association and of the Code Authority in Washington, where they could closely cooperate with NRA.

Limitations of Existing Statistical Data

This study has developed the fact that the existing statistical information is not adequate to determine accurately either what happened to labor, the industry and the consumer during the period through which the code operated, or to determine what part of any change indicated was due to the code itself.

For determining what happened to Labor we are dependent upon the Bureau of Labor Statistics, which compiles the only continuous series of labor data. This is based on a sample for one week of each month gathered from a limited number of firms and extrapolated to obtain estimates for the entire industry. The figures are, therefore, only as accurate as the sample is representative of the industry, as a whole. The results indicated are that the code did definitely help labor.

Labor's Position Improved During the Code

Under the code, the first Spring or busy season of the year, when contrasted with the same period for the previous year showed an increase in hourly rates of 41.5 per cent. Weekly earnings increased 6.1%. The maximum hour provisions of the code spread employment by 50 per cent, and purchasing power was increased by a 62 per cent gain in the industry's payroll. In citing these effects on labor it is

recognized that the rise of 13.6 per cent in the Industry's production tonnage between 1933 and 1934 caused by the increase in the farmer's income, and that the demand for fertilizer contributed to the labor gains.

During the second year of code operation production made a further increase of 13.8 per cent. This is reflected in the comparative spring labor statistics, which show an increase in total man hours of 6.6 per cent. This did not result in spreading employment further, as the average man hours per week increased 3.2 per cent and the number employed decreased 3.5 per cent, while average hourly wage rates decreased 3 per cent. The individual worker's weekly pay envelope decreased four-tenths of one per cent.

The Industry's Improved Financial Position During The Code

The industry improved its financial position during the code period. Cost studies by The National Fertilizer Association indicate that the manufacturer received 34 per cent more for representative grades of fertilizer in 1934 than he had received in 1933. Of this gain in price 33.6 per cent represented increased revenue to the manufacturer. The financial statistics of income of the industry from the Treasury Department for the code period are not yet available. Current financial reports indicate that the industry has come back remarkably during the two years of code operation, and has turned pre-code losses into profits. Figures for three of the largest companies show this trend:

Net Profits Before Interest and Dividends
(Fiscal Year ended June 30)

	Virginia-Carolina Chemical Corporation	International Agricultural Corporation	American Agricultural Chemical Co.
1935	$1,277,578	$562,787	$1,427,604
1934	492,377	684,317	977,119
1933	762,828*	705,119*	408,128*
1932	783,509*	419,242*	1,189,461*
1931	369,606*	509,174	215,616*

* Loss

Consumer Position During Codal Period

The above described stabilization of the industry with increased profits and an improved position for Labor, was apparently effected without increasing the prices of fertilizer to the farmer (as indicated by the available statistics) any more than the increase in prices in general, and only to a fraction of the increase in the prices received by the farmer for the things which he sells.

The inadequacy of statistics for determining exactly what happened to the prices of fertilizer to the fermer during the period for which

the code operated is primarily due to the lack of accurate information as to what was really paid for fertilizer in pre-code years, because of price cutting and rebating that were then common practices. Such figures as are available were obtained by the Bureau of Agricultural Economics from a questionnaire sent to dealers. They represent the prices that the latter say they customarily charged farmers for particular grades of fertilizer. No actual canvass of retail sales prices is available.

The index thus obtained indicates that in March of 1934 and 1935 prices were only 14 and 15 per cent, respectively, above the comparative period of the pre-code year 1933. In that year, according to The National Fertilizer Association's cost survey, sales prices were below the cost of manufacture. This survey was undertaken at the request of N.R.A., so that farmers or their representatives who complained of prices might have the facts on cost of production. Considering that some 50,000 agents and dealers are engaged in the distribution of fertilizer to 2,250,000 farmers, comparatively few complaints of the prices charged were made during the period of Code operation.

POST CODE CONDITIONS IN THE INDUSTRY

The fertilizer industry has not had a busy season since the Schechter decision, which came at the period of minimum demand for fertilizer. Nevertheless, in anticipation of the intensive selling season which will begin in January, 1936, the industry has exerted every effort to consolidate the gains which it made under NRA, and to prevent the recurrence of the chaotic conditions that have prevailed periodically.

Appeals were made to preserve code standards; and the industry was one of the first to cooperate with the Government in submitting a Voluntary Code, containing both fair trade practice and labor provisions.

Evidence presented at the hearings and at the Annual Southern Convention in November, 1935, indicates that some companies are deviating sharply from code practice, and that they have so lowered labor standards that their labor cost per ton has been cut in half.

The industry is one in which some advantages accrue to both large scale and small scale producers. With a large number of firms ever ready to upset the price structure, it seems as though history were about to repeat itself. Previous codes have worked fairly well during the first year, but not so effectively in the second year; and then, as the volumes of business has declined, the law of the jungle has again prevailed. Special legislation may yet be needed to save the industry.

USEFULNESS OF THE FERTILIZER INDUSTRY STUDY

The NRA experience with the code for the fertilizer industry demonstrated that such industrial legislation is practicable under certain conditions. This industry was sufficiently well organized and experienced to know its own problems, and which code provisions would help to solve them. It had available personnel experienced in administering codes, so that the administrative work was handled with a minimum of Governmental assistance. This code contributed to the stabilization of the industry, the spread of employment and the increase of wages, and the placing of the industry on a profitable basis with a relatively moderate increase in price to the consumer.

CHAPTER I

HISTORY, DEVELOPMENT AND PROBLEMS OF THE FERTILIZER INDUSTRY

DEFINITION OF THE INDUSTRY

The fertilizer industry consists primarily of the production and distribution of fertilizer materials in their original form or in mixtures of these materials in varying proportions. The definition of the industry in the code, recognized that companies classified as fertilizer companies normally produced only one of the constituent parts of mixed fertilizer-superphosphate. The other principal materials, namely, potash and nitrogen carriers, are produced mainly by chemical companies, and their production did not come under the definition of the Industry contained in the code although their distribution was included when sold to dealers or directly to consumers. (*). Chart 1 gives a graphic portrayal of the organization of the fertilizer industry.

INDUSTRY STATISTICS.

In the year ending June 30, 1935, there were sold some 6,200,000 tons of fertilizer, with an estimated retail value of $158,500,000.(**). The industry in 1933, the last Census year for which figures are available, employed an average of 13,068 wage earners with an annual payroll of $7,274,000. For the last ten Census years since 1909 the annual average number of wage earners was 18,969 and the annual average payroll was $14,846,000. The peak was reached in 1919 when 26,296 wage earners were employed and the annual payroll was $25,363,132.(***).

IMPORTANCE OF LARGE COMPANIES.

Although individual companies do not make public their tonnage figures, a Court case in 1926 brought out the fact that from January 1, 1924 to May 1, 1926 with more than six hundred fertilizer companies operating in the United States, six companies manufactured about 80 percent of the fertilizer sold in the country during that period. The so-called "Big Six" companies were: Armour Fertilizer Works, Swift and Company, the Virginia-Carolina Chemical Company, the American Agricultural Chemical Corporation, International Agricultural Chemical

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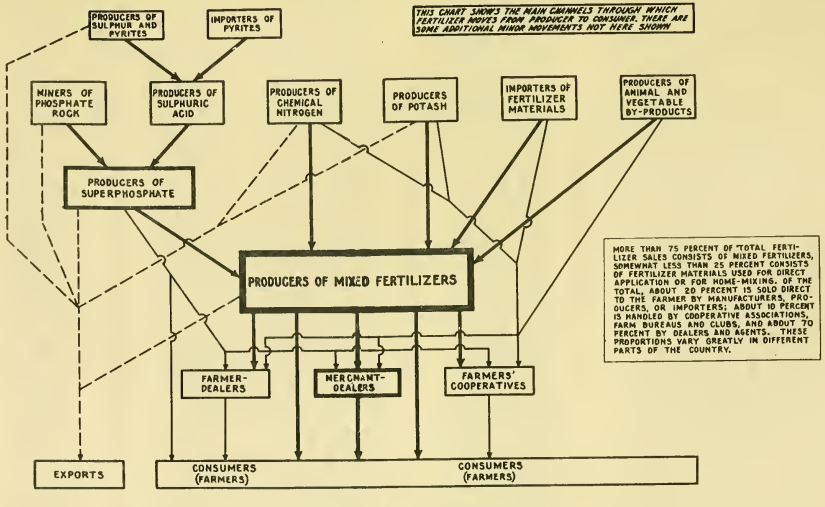
(*) The detailed definitions of the Industry as adopted by the Code are contained in Article II, Codes of Fair Competition, Volume II, p. 123.

(**) Press release, Federal Trade Commission, November 8, 1935 - Trade Practice Conference Rules for The Fertilizer Industry (in Federal Trade Commission Library).

(***) These figures were derived from the Census figures. The last ten Census years cover the years 1909, 1914, 1919, 1921, 1923, 1925, 1927, 1929, 1931 and 1933. Until 1919 the Census was only made at five year intervals.

CHART I

ORGANIZATION OF THE FERTILIZER INDUSTRY



PREPARED BY THE NATIONAL FERTILIZER ASSOCIATION

Corporation and F. S. Royster Guano Company (*).

IMPORTANCE OF THE INDUSTRY

The fertilizer industry is a "key" industry, important far beyond the dollar value of its products, since their use affects the production of billions of dollars worth of crops. A survey by The National Fertilizer Association on fertilizer practices among 48,000 farmers in thirty-five states of the United States indicated that each dollar spent for fertilizer by these farmers resulted in an average increase of $3.50 in the value of crops on which the fertilizer was used.(**). Fertilizer is highly essential in the program for more effective land utilization, and as a means of reducing the cost of production of certain agricultural crops. The leading nations have sought to obtain national self-sufficiency with reference to fertilizer materials, not only because of their wartime value for increasing crops with a smaller amount of labor, but also because the nitrogen materials are the bases of explosives and of chemical warfare.

WHY FERTILIZER IS USED

The application of plant food or fertilizer is necessary because growing crops consume certain chemical elements contained in the soil which are necessary for plant growth. It is the function of fertilizer to replace this depletion or to make up for original deficiencies of these elements in the soil by providing them in such form that the plants can readily assimilate them.

FARMERS VIRTUALLY SOLE CONSUMERS

It has been estimated that 98 per cent of the production of the fertilizer industry is sold to farmers(***) and 2,239,548 farms reported the purchase of commercial fertilizer in 1929. These farms represented approximately one-third of the farms reporting to the Census(****). It must not be assumed from these figures, however, that the fertilizer industry has tapped only one-third of its potential market since not

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(*) Information filed December 10, 1926 in the District Court for the District of Maryland in the case of the United States versus the American Agricultural Chemical Company, et al. (Copy in N.R.A. Legal Division Files).

(**) American Fertilizer Practices, The National Fertilizer Association, 1929, p. 143.

(***) Testimony of Charles J. Brand, Executive Secretary, The National Fertilizer Association, Hearing on the Code of Fair Competition for the Fertilizer Industry, September 6, 1933, p. 41. (Copy available in N.R.A. Files, Fertilizer Industry).

(****) Fifteenth Census of the United States, 1930, Agriculture, Vol. II, Part I, Summary for the United States, Table 22, p. 53, U. S. Department of Commerce, Bureau of the Census, 1932.

all soils need additional plant food and some lack the water without which fertilizer is ineffective. Fertilizer is mainly used along the Atlantic seaboard and in the Old South where the plant food content of the soil is either naturally low or has been depleted by the system of farming. Map 1 made by the United States Department of Agriculture, Bureau of Agricultural Economics, entitled, "Expenditure for Fertilizer by Farmers, 1929," and drafted from Census of Agriculture data, gives a good picture of the market for fertilizer.

MARKET GEOGRAPHICALLY CONCENTRATED

As will be seen from the following table, 71 per cent of the fertilizer purchased by farmers in 1929 was bought in ten states (*).

TABLE 1

PER CENT OF ALL FERTILIZER BOUGHT IN 1929 BY TEN LEADING CONSUMING STATES

State	Tons Bought	Per Cent U.S. Total	Cumulative Per Cent	Per cent of farms Reporting
1. North Carolina	1,107,763	14.70	14.70	83.47
2. Georgia	860,602	11.42	26.12	84.76
3. South Carolina	708,470	9.40	35.52	88.00
4. Alabama	646,707	8.58	44.10	80.68
5. Virginia	388,937	5.16	49.26	63.40
6. Florida	372,473	4.94	54.20	66.95
7. Pennsylvania	348,113	4.62	58.82	62.63
8. Ohio	330,444	4.39	63.21	59.05
9. Mississippi	307,693	4.09	67.30	48.31
10. New York	287,959	3.82	71.12	50.95
Total 10 States	5,359,165	71.12	71.12	
U. S. Total	7,535,022	100		35.61

Census of Agriculture, 1930, Vol. II, Part I - U. S. Summary, Table 22, p. 53 - Tons of Commercial Fertilizer Bought bt Farmers in 1929.

Five states, all Southern, bought approximately half (49.26 per cent) of the total reported. While for the United States as a whole 35.61 per cent of the farms reported purchases of fertilizer, particular States showed the following percentages: North Carolina, 83.47 per cent; Georgia, 84.76 per cent; South Carolina, 88 per cent; Alabama, 80.63 per cent; and Virginia, 63.40 per cent.

PLANT LOCATION

Fertilizer is a heavy material with low specific value and high freight rates have caused the concentration of a large percentage of

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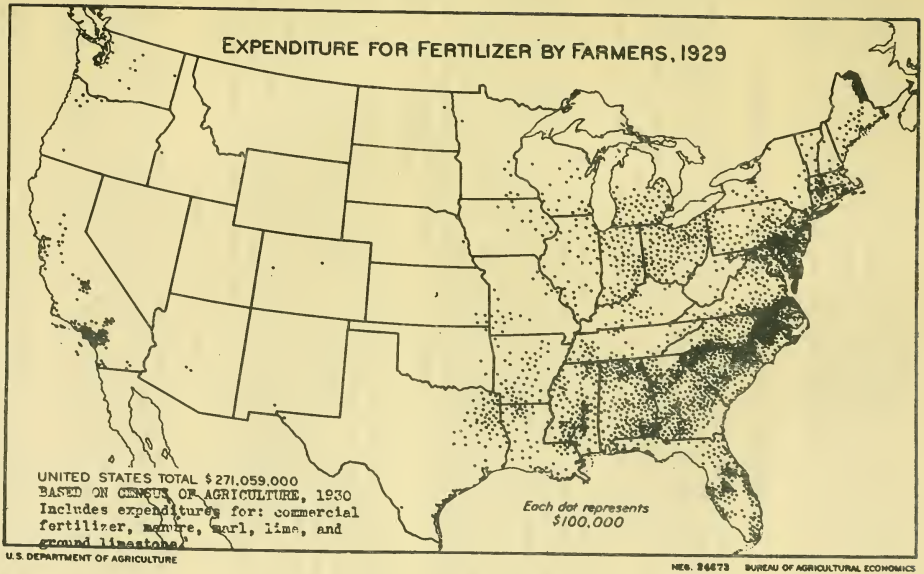
(*) Census of Agriculture, loc. cit. supra.

MAP 1


EXPENDITURE FOR FERTILIZER BY FARMERS, 1929
UNITED STATES TOTAL $271,059,000
BASED ON CENSUS OF AGRICULTURE, 1930
Includes expenditures for: commercial fertilizer, manure, marl, lime, and ground limestone
Each dot represents $100,000
U.S. DEPARTMENT OF AGRICULTURE
NEG. 26473 BUREAU OF AGRICULTURAL ECONOMICS

the plants in the main consuming areas. Baltimore is a central point for the manufacture of fertilizer. Map 2 portrays the plant location graphically. This map also includes the location of the synthetic nitrogen plants and the potash plants. The nitrogen plants are located primarily near sources of electric energy and the location of potash plants is determined by the natural deposits of these chemicals.

INTERSTATE ASPECTS OF THE FERTILIZER INDUSTRY

Maps 1 and 2 indicate the widely divergent locations of the sources of the raw materials, the manufacturing plants and the consumers. They illustrate not only the interstate aspects of the fertilizer industry but also show the great importance of transportation to the Industry. "About 25 per cent of the cost of the product when it reaches the consumers' hands is represented by in and out freight"(*).

In 1933, 37 per cent (**) of the fertilizer business consisted of the distribution of fertilizer materials to farmer consumers in the various states of the United States. Of course, the balance of the fertilizer materials purchased by manufacturers are distributed to consumers after having been mixed in varying proportions to make a fertilizer adapted to the needs of the particular soils and crops on which it is to be used. While that portion of the fertilizer industry which consists of distribution of materials is almost entirely intrastate commerce, much mixed fertilizer is also shipped outside of the State in which it is produced.

Map 2 indicates that the sources of the raw materials are highly concentrated geographically. Potash is either imported into the United States or comes from California or New Mexico. Phosphate rock comes primarily from Florida and to a lesser extent from Tennessee. Map 2 does not show the sulphur deposits of the United States which are located in Texas and Louisiana. The sulphuric acid used by fertilizer manufacturers in converting phosphate rock into superphosphate is made with sulphur obtained from these deposits or from imported pyrites.

THREE TYPES OF PLANTS

The industry as defined by the code comprised three different types of plants, each of which had different problems. Seven hundred seventy-two of the 968 plants engaged in the industry during 1935 purchased all of their raw materials and merely mixed them in the desired proportions. Although a portion of these dry mixing plants were owned

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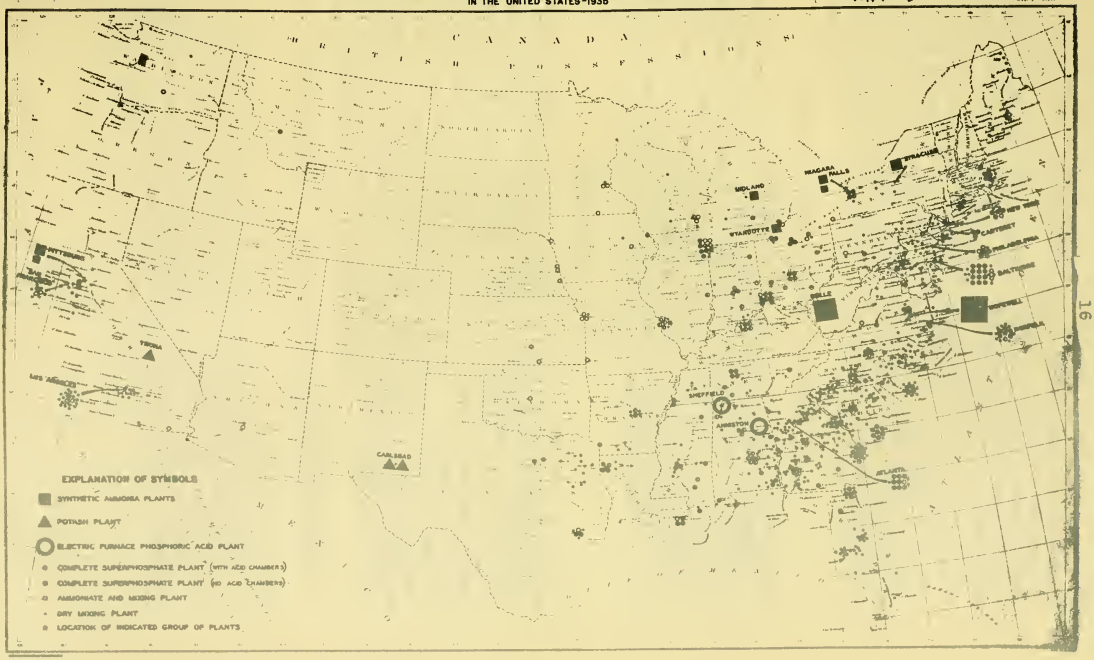
(*) "For Better or For Worse--Our Industry," by Charles J. Brand, Executive Secretary and Treasurer, The National Fertilizer Association, Proceedings of the Third Annual Convention of The National Fertilizer Association, The National Fertilizer Association, June 1927, p. 40.

(**) 3,274,000 tons of mixed fertilizer out of total business of 5,196,000 tons--Census of Manufactures, 1933, Fertilizers. U.S. Department of Commerce, Bureau of the Census, p. 19.

LOCATION OF THE FERTILIZER INDUSTRY

IN THE UNITED STATES-1935

MAP ?



by the large fertilizer manufacturers, a preponderant number were owned by small operators. One hundred ninety-six plants manufactured superphosphate, one of the constituent raw materials in most fertilizers. One hundred of them also manufactured the sulphuric acid necessary for the production of superphosphate.(*). These acid plants necessitate a relatively large capital investment and in general are run continuously all year. Production in a superphosphate plant is much more uniformly spread throughout the year than is the case of the production of mixed fertilizer. The process of making mixed fertilizer is ordinarily divided into two parts; the first of which consists of the production of so-called "base" goods and precedes by about four months the mixing of the fertilizers into particular grades after the orders have been received.

CAUSES OF PROBLEMS OF THE INDUSTRY

The problems of the fertilizer industry arise largely because of its dependence on the one consuming market--the farmer. The demand for fertilizer fluctuates almost directly in proportion to the farmer's income in the preceding year. The bulk of the fertilizer is used on certain of our great staple crops such as cotton, tobacco, potatoes and truck crops. The farmer ordinarily cannot pay for the fertilizer consumed until the crops on which the fertilizer is used have been harvested and sold, which creates a problem of providing credit.

Seasonality of Demand

A marked seasonal demand is brought about because most of the fertilizer is used at planting time which is mainly in the Spring. It has always been difficult to get the farmer to anticipate his fertilizer requirements by advance purchases due to such factors as lack of cash or credit prior to planting time, inadequate storage space for fertilizer at the farm and fear on the part of the farmer that the product would deteriorate before he was ready to use it. The seasonality problem has become steadily more acute with the advent of the automobile and the good roads which, together with keenly competitive conditions in the fertilizer industry itself, have contributed to the farmer postponing his purchases to virtually the last minute and then demanding almost immediate delivery of his requirements.

This marked seasonality is indicated by the following tabular

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(*) Compilation made by the Fertilizer Industry Study from plant listings in The American Fertilizer Handbook-1935, Ware Brothers, Philadelphia, Pennsylvania, pp. A3-A58, and checked with lists of producers who filed prices under provisions of the Code for the Fertilizer Industry. --This tabulation is included in the Appendix II and is marked Exhibit 1.

presentation of tax tag sales in thirteen Southern states (*).

TABLE 2

PERCENTAGE OF TAX TAGS SOLD EACH MONTH IN THE 13 SOUTHERN STATES BASED ON THE RECORDS FOR THE FOUR SEASONS, 1926-27, 1927-28, 1928-29 and 1929-30 (**)

	Per cent	Per cent
January	9.89	
February	17.85	
March	36.28	
April	20.45	
Total four months		84.47
May	3.92	
June	1.30	
July	.43	
August	1.00	
September	2.95	
October	2.27	
November	1.47	
December	2.19	
Total eight months		15.53
GRAND TOTAL - 12 months		100.00

Producers of mixed fertilizers must thus obtain the major portion of their volume of sales in a very limited period and this has led to the employment of not less than 50,000 dealers and agents(***) in order to book all possible available business.

Production Capacity

These buying practices of the farmer have placed an increased

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(*) The laws of these states require that these tax tags be purchased from the state and attached to the fertilizer when sold. Their sales do not indicate shipments but Mr. Charles J. Brand, Executive Secretary, The National Fertilizer Association, in a conference with Mr. Al F. O'Donnell, Unit Chief, Fertilizer Industry Study, on Oct. 25, 1935, estimated that the lag in shipments is from 3 to 4 weeks after the purchase of the tags.

(**) Application for Presentation of a Code of Fair Competition to the National Recovery Administration, submitted August 2, 1933, by The National Fertilizer Association, Chart 2. (In N.R.A. Files, Fertilizer Code).

(***) N.F.A. News, April 17, 1934, The National Fertilizer Association, p. 191.

burden on the manufacturer. The average manufacturer lacks adequate storage space and in many cases cannot afford to carry a heavy inventory which would necessitate speculation in raw materials. Raw material costs in 1934 constituted 62.3 per cent (*) of the total cost of mixed fertilizer at the manufacturer's plant.

Thus the dry mixing plants usually have a production capacity which will take care of their peak demand. It appears quite certain that if even a majority of existing plants operated for any considerable period prior to the active selling seasons, a substantial oversupply of mixed fertilizer could be produced. However, as with all seasonable merchandise, producers naturally limit their productive operations to as short a period as possible immediately prior to the time orders need to be shipped. References to the excess productive capacity of these plants and of the industry in general, therefore, should be subjected to very careful scrutiny as to how overproduction capacity is defined. For firms which manufacture superphosphate productive capacity is largely a matter of sufficient capital and storage space for the finished product since sulphuric acid can be purchased in the open market(**).

Seasonality of Production

The following tabulation illustrates the seasonality of production, indicating for a three-year average, 1932-1934, inclusive, the percentage which each month's man-hours bears to the total annual number of man-hours(***).

TABLE 3

SEASONALITY OF EMPLOYMENT
AVERAGE PER CENT OF ANNUAL MAN-HOURS WORKED EACH MONTH

1932-1934

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
8.1	8.8	10.4	16.4	8.8	5.5	5.6	6.0	7.7	7.8	7.4	7.5

(*) A General Report On Mixed Fertilizer Costs and Sales Prices, Spring Seasons 1933 and 1934 in the Principal Fertilizer Consuming Area in the United States, The Fertilizer Recovery Committee, October 26, 1934. (In N.R.A. Files, Fertilizer Code).

(**) Appendix II, Exhibit 2, contains a discussion of some of the allegations as to the Industry's productive capacity.

(***) Calculated from the figures derived from the Bureau of Labor Statistics data contained in Table 3, p. 8 of Exhibit A of the Fertilizer Industry N.R.A. Archives.

COMPETITIVE PRACTICES PRIOR TO THE CODE

Competition for the farmers' fertilizer business is always keen, but in years following a decline in agricultural income with the resultant diminished demand for fertilizer, each producer of fertilizer was tempted to utilize every conceivable method of competition in an attempt to maintain his volume of business. This resulted in a state of competition from which so-called unfair trade practices resulted.

Many of these practices had to do with methods of price cutting, of which the most serious was perhaps the guaranteeing to the dealer or farmer of prices against decline, not only as to the seller's own prices but as to those of competing producers. This was especially serious because a large percentage of fertilizer sales were made on a credit basis, due to the farmer's inability to pay until he received the proceeds of the crop on which the fertilizer was used. The purchaser's settlement at the end of the season was based upon the lowest price at which any producer had offered to sell him that particular grade during the season. Variations in quality were often ignored, and the sale of a very small tonnage at a low price late in the season, by some producer who had not been able to move his inventory, caused heavy losses to numerous other producers.

In many instances retroactive settlements were made on cash sales, if at the end of the season prices had declined below those which a particular dealer or farmer had had to pay. Competition often resulted in the unwise extension of credit, and large industry losses resulted. Price cutting by rebates and trucking allowances, special containers without adequate charges therefor, or by offering a multiplicity of grades which deviated only slightly from the standard, were also extensively utilized as price cutting behicles. Warehouses were often established at strategic points and sales made from them at factory prices. In many instances materials such such as nitrate of soda were used as loss-leaders in order to influence the sale of mixed fertilizer (*).

RESULTS OF INDUSTRY'S INSTABILITY

This periodic chaos and use of so-called unfair methods of competition in the fertilizer industry have repeatedly caused the Industry as a whole to lose money. Leading chemical concerns noted for their managerial ability such as Allied Chemical and DuPont who are large producers of certain of the leading raw materials entering into the production of mixed fertilizers have never gone into the mixed fertilizer business. In reviewing the history of the DuPont Company in a recent article in Fortune Magazine (**), it was said that the DuPont Company had considered this matter in 1913 and again in 1929 but had definitely turned it down as being unwilling to enter a "sick" industry.

(*) An excellent description covering the above described conditions in the Fertilizer Industry in the pre-codal period was made by Mr. Charles J. Brand, Executive Secretary of The National Fertilizer Association in his address entitled "Our Industry under the Code", as reported in the Proceedings of the Eleventh Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1935, pp.24-26

(**) DuPont II: "An Industrial Empire" --Fortune, Volume X, No. 6, December 1934, p. 180

That it has been a sick industry is best evidenced by the fact that each of the larger companies engaged primarily in the fertilizer business and who have had their securities listed on the New York Stock Exchange has been through reorganization or receivership since 1920. A combination of adverse business conditions and financial losses together with poorly balanced capital structures, topheavy with funded debt, caused most, if not all, of these reorganizations because of inability to meet fixed charges when profits declined.

COOPERATIVE EFFORTS TOWARD INDUSTRY STABILIZATION

The industry, in its attempts to stop its virtual self-destruction, had had a considerable amount of experience in administering codes prior to N.R.A. In periods following a year of decline in agricultural income, the fertilizer industry with its decreased volume of business has repeatedly become more conscious of the necessity for cooperative effort in curbing unfair trade practices and the result has been a series of codes of fair trade practices. All the codes up to and including the one presented to the Federal Trade Commission for approval in October 1935 have been primarily designed to curtail methods of price cutting. The adoption of a code under the N.R.A. was the culmination of cooperative efforts begun long before. The first of these efforts of which we have a record was the formation of the Colonial Development Company, Ltd., in 1903. The trend of thought of the leaders of the industry in each of these cases was addressed to the matter of allocating production and fixing prices.

Price Fixing - Allocation of Production Code (1903)

The Colonial Development Company, Ltd., was organized under the laws of the province of Ontario, Canada as a method of allocating production and fixing prices. Without going too much into the technical details of the sale of stock in the Colonial Development Company, Ltd., to the various fertilizer manufacturers in the United States, the following is a description of the way the plan operated:

"As soon as it was organized, the Colonial Development Co., (Ltd.) entered into contracts with each of the parties to the agreement, which contracts provided that each company should be allowed the same percentage of total sales in these States that it had enjoyed during the year ending June 30, 1903. If it should sell more than this allotment, it was to be penalized; if it should sell more than 75 per cent of its allotment but less than 100 per cent, it should receive a rebate for the proportion which it failed to sell, amounting to $1.50 per ton for ammoniated goods and $1 for alkaline goods and acid phosphate. The 75 per cent minimum was inserted to lessen the advantage which a company might obtain by overstating its sales for the year 1903.

"Each company which was party to the agreement was required to deposit with the Colonial Development Co. a sum amounting to 20 cents a ton upon its allotment, which sum was to be returned to the company at the end of the fertilizer year, provided that it had maintained the fixed prices. In case any company did not maintain the established prices, it forfeited this sum to the Colonial

Development Co." (*)

The scheme seemed to work successfully during the two years which it operated in spite of the fact that the American Agricultural Chemical Company and Swift and Company did not enter the combination but according to the Federal Trade Commission these companies "respected the prices charged by the parties to the combination so that very little if any competition was encountered from the independent wet mixers" (**). An indictment was returned May 25, 1906, in the Middle District of Tennessee against thirty-one corporations and twenty-five individuals engaged in the fertilizer business who were parties to this price fixing combination charging a conspiracy in violation of the Sherman Anti-Trust Act and a conspiracy to commit an offense against the United States in violation of Section 5440 of the Revised Statutes. On July 5, 1908 the indictment was quashed but the combination was effectively broken up as a result of the suit.

1933 Interest in These Subjects

That these same problems persisted at the time of formation of the N.R.A. is indicated by the following excerpts from a fertilizer manufacturer's telegram which antedated by several weeks the signing of the National Industrial Recovery Act.

> " - - - Unless Industrial Recovery Act has teeth in it and unless industry is permitted to allocate production and fix prices, industry will be no better off than it is today. In fact with respect to many industries containing large numbers of irresponsible units the larger and more responsible units will be at distinct disadvantage. This will be particularly true of Fertilizer Industry. - - - If our efforts are to be confined to objectives of raising wages and fixing hours of labor, we will get nowhere in our industry as neither wages nor hours of labor are of primary importance. We are deeply concerned with question of overproduction and with price structure. Frankly our Industry nearly bankrupt through inability to deal with these questions constructively and legally." (***)

Another indication that the industry was interested in these problems is evidenced by the questions addressed at a fertilizer manufacturers' convention to a lawyer who had worked on the preparation of the National Industrial Recovery Act,

Mr. Brand: "Would you be willing to tell us something of the attitude disclosed at the hearings and in debate as to the question of price fixing?"

(*) "Report on the Fertilizer Industry", Federal Trade Commission, August 19, 1916, in response to Senate Resolution #487, 62nd Congress, 3rd Session; p. 244.

(**) Ibid p. 185.

(***) Telegram from Horace Bowker, President, The American Agricultural Chemical Company, addressed to President Franklin Delano Roosevelt, dated May 23, 1933. (In N.R.A. Files, Fertilizer Code)

Mr. Long: "Would you care to discuss the idea of setting up production quotas?" (*)

AGRICULTURAL INCOME, FERTILIZER PRODUCTION AND FERTILIZER INDUSTRY PROFITS

To assist in an understanding of the reasons for the adoption of the various codes, what measure of success they had and why they failed, the following tables have been included at this point and will be utilized in explaining the history of the various codes: Table 4 - Agricultural Income and Fertilizer Production; Table 5 - Net Income; Certain Fertilizer Companies.

Beginning with 1927, we have available the statistics of income for the Industry as compiled by the Bureau of Internal Revenue of the Treasury Department of the United States (**).

Statistics selected from the above mentioned exhibit and calculations made therefrom are included in Table 6.

HISTORY OF THE VARIOUS PRE-NRA CODES

Resume

The Industry is one in which there are some advantages accruing to large scale and to small scale producers. With a large number of firms ever ready to upset the price structure, previous codes have worked fairly well during the first year, not so effectively in the second year, after which, if the volume of business declined, the "law of the jungle" again prevailed.

As the problems of the industry have remained essentially the same as they were at the time of the formation of the Colonial Development Company in 1903, it is natural that all efforts to provide rules of fair trade practice have been of the same general nature.

It has been explained that there is a natural uniformity in the price lists issued by all producers at the beginning of a fertilizer season. All of the trade practice rules which were incorporated in the various plans adopted by the industry were designed to prevent a break-down of these prices through the offer of rebates and special allowances.

In the following paragraphs we summarize the various codes which attempted to accomplish these objectives none of which for various reasons proved continuously successful.

(*) "Industrial Recovery", by Simon H. Rifkind of the law firm of Wagner, Quillinan, and Rifkind and former Secretary to Senator Wagner, Proceedings of the Ninth Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1933, pp.82-84.

(**) A detailed tabulation of the consolidated balance sheets and income accounts of fertilizer companies reporting to the Treasury Department is contained in Appendix II of this Report and is labelled Exhibit 3.

TABLE 4

Gross Income from Farm Production (1) - 1909-1934, and from Crops (2) and Cotton and Cottonseed (2) for years indicated together with Tons of Fertilizer sold (3) next succeeding year.

Year	Gross Income from Farm Production (in million dollars) Total	From Crops	From Cotton and Cottonseed	Year	Fertilizer Sold (tons)
1909	$6,238	- -	- -	1910	5,452,223
1910	6,643	- -	- -	1911	6,023,541
1911	6,372	- -	- -	1912	5,766,916
1912	6,784	- -	- -	1913	6,336,972
1913	6,975	- -	- -	1914	7,099,619
1914	7,028	- -	- -	1915	5,323,262
1915	7,395	- -	- -	1916	5,124,904
1916	8,914	- -	- -	1917	5,925,028
1917	12,834	- -	- -	1918	6,466,186
1918	15,101	- -	- -	1919	6,625,343
1919	16,935	- -	2,271	1920	7,176,754
1920	13,566	- -	1,272	1921	4,862,931
1921	8,927	- -	760	1922	5,669,915
1922	9,944	- -	1,251	1923	6,442,314
1923	11,041	- -	1,608	1924	6,824,911
1924	11,337	6,170	1,710	1925	7,333,166
1925	11,968	6,148	1,740	1926	7,328,268
1926	11,480	5,468	1,251	1927	6,843,199
1927	11,816	5,817	1,464	1928	7,985,019
1928	11,741	5,675	1,470	1929	7,974,712
1929	11,941	5,434	1,389	1930	8,153,257
1930	9,454	3,818	751	1931	6,306,083
1931	6,968	2,746	528	1932	4,379,350
1932	5,337	2,295	464	1933	4,868,340
1933	6,406	3,032	688	1934	5,532,956
1934	7,300	3,077	723	1935	6,200,000 (4)

(1) 1909-1934 - Crops and Markets, U. S. Department of Agriculture, Volume 12, No. 7, July 1935.

(2) 1919-1923 - U. S. Department of Agriculture Yearbook, 1927, Table 492. Page 1146.
1924-1934 - Crops and Markets, op. cit. supra.

(3) National Fertilizer Association - Based on tax tags sales in States which require them. Other states estimated from various sources. For complete details of this see table , which gives individual State figures.

(4) Preliminary.

TABLE 5

NET PROFITS OF CERTAIN FERTILIZER COMPANIES
(BEFORE INTEREST AND DIVIDENDS)
1912-1935

Year ended	Virginia-Carolina Chemical Corp. June 30	International Agricultural Corporation June 30	The American Agricultural Chemical Co. June 30	Standard Wholesale Phosphate Works, Inc. May 31	The Smith Agricultural Chemical Oct. 31
1935	$1,277,578	$562,787	$1,427,304	$126,104	
1934	492,377	684,517	977,119	120,313	$114,414
1933	762,828*	705,119*	508,123*	157,298	54,178
1932	783,509*	419,242*	1,189,461*	128,163	7,631*
1931	369,606*	509,174	215,616*	383,571	54,796
1930	1,407,003	1,995,891	2,228,875	595,995	155,082
1929	1,515,502	1,608,922	1,503,955	584,557	183,180
1928	2,510,702	1,892,421	3,519,795	562,663	203,542
1927	219,854*	88,939	351,962*	249,475	138,214
1926	2,541,740	1,879,480	3,075,115	448,696	119,465
1925	3,277,773	1,776,888	4,386,351	258,443	128,743
1924	1,822,290*	382,303	2,553,830	197,424	66,854
1923	403,474	18,724*	3,031,423	114,018	61,565
1922	1,484,780	1,076,236	1,452,199	350,025	54,390*
1921	13,152,876*	1,762,020*	4,697,780*		114,877*
1920	9,251,746	2,621,059	5,888,767		282,552
1919	8,933,335	2,118,503	4,943,456		117,402
1918	10,193,267	1,701,507	8,987,424		185,598
1917	5,905,250	1,135, 112	6,220,773		184,327
1916	5,667,846	1,955,601	6,328,920		476,736
1915	4,979,950	793,677	4,513,239		208,705
1914	4,073,757	953,497	3,678,199		63,267
1913	2,991,102	488,507	3,103,958		60,004
1912	4,626,203	2,031,209	3,085,395		85,466

*Loss

The first code on a national scale was set up in 1921 as a result of the intense competition which had prevailed in the Spring of that year. The re-emphasis of this code in 1924 was largely tied up with the bad debt losses of the industry incurred in 1921 but which were written off to a large extent in 1923 and 1924.

Difficulty with the anti-trust laws in 1926, due to the industry having gone beyond the code in stabilizing competitive conditions, resulted in a code sanctioned by the Department of Justice in 1927.

As members began to break away from this voluntary code it was felt necessary to get the Federal Trade Commission to approve the rules of trade practice which were enforceable at law, thus giving the code sponsors a better control over conditions. This code in turn broke down because of industry conditions coupled with modifications in the code by the Federal Trade Commission itself in 1931. Industry leaders welcomed the opportunity provided by the NRA to secure a measure of freedom from the restraint of the existing anti-trust laws and to be able to give the force of law to the rules which they wished to adopt to stabilize competitive conditions.

Fourteen Points Code (1921)

The above tabulations show that during the World War the total Industry production and the profits of the leading companies were well sustained and highly satisfactory. In 1920, the gross income from farm production dropped from $16,935,000,000 to $13,566,000,000 and in 1921 to only $8,927,000,000. A corresponding decline took place in the tonnage of fertilizer sold which dropped from 7,176,754 tons in 1920 to 4,862,931 tons in 1921. This drastic decrease in farm income and the resultant decline in the tonnage of fertilizer sold resulted in the increased use of the previously described competitive tactics with attendant losses to the industry as indicated by the above financial returns for certain of the leading companies for their fiscal years ending June 30, 1921.

The heavy losses which the industry incurred in this year were in large measure caused by unsound business judgments as to the prospective volume of business which would be abailable in that year. Excessive quantities of raw materials were contracted for at high prices, and there followed a mad scramble for business with little regard for prices or terms of sale and with the extension of much credit to purchasers of fertilizer which in the light of conditions as they developed proved to have been most unwise (*).

This intensive competition for a diminished volume of business brought attention to the unfair competitive practices and resulted in 1921 in the adoption by the industry of a so-called Fourteen Points Code which was designed to curb them. The beneficial effects of this code were reflected by the industry operating at a profit in 1922 as contrasted to the heavy losses in 1921.

(*) Informations filed December 10, 1926, in the District Court for the District of Maryland in the case of the United States versus The American Agricultural Chemical Company, et al. (Copy available in N.R.A. Legal Files)

TABLE 6

FERTILIZER INDUSTRY INCOME STATISTICS

1927 - 1935

Year	FROM RETURNS SHOWING "NET INCOME": Number of Returns	Per Cent of Total	Gross Sales	Per Cent of Total	Net Income Amount	Per Cent of Sales
1933	110	40.0	42,602,764	44.7	2,087,377	4.9
1932	59	20.1	13,504,785	16.2	359,553	2.7
1931	91	29.5	22,419,843	19.5	939,503	4.2
1930	177	56.4	110,142,387	59.6	6,234,428	5.7
1929	211	69.2	170,165,235	80.0	9,241,863	5.4
1928	206	70.1	189,330,447	94.0	11,819,181	6.2
1927	165	61.6	84,721,890	56.1	5,032,015	5.9

Year	FROM RETURNS SHOWING "NO NET INCOME": Number of Returns	Per Cent of Total	Gross Sales	Per Cent of Total	Net Deficit Amount	Per Cent of Total
1933	165	60.0	52,602,857	55.3	4,562,133	8.7
1932	235	79.9	70,089,185	83.8	8,416,658	12.0
1931	217	70.5	92,778,923	80.5	11,696,880	12.6
1930	137	43.6	74,767,958	40.4	4,964,575	6.6
1929	94	30.8	42,574,796	20.0	1,566,342	3.7
1928	88	29.9	12,069,749	6.0	1,916,133	15.9
1927	103	38.4	66,393,318	43.9	6,810,275	10.3

Year	COMBINED "NET INCOME" AND "NO NET INCOME": Number of Returns	Gross Sales	Net Income or Net Deficit	Per Cent of Sales
1933	275	95,205,621	2,474,756*	2.6*
1932	294	83,593,970	8,057,105*	9.6*
1931	308	115,198,766	10,757,377*	9.3*
1930	314	184,910,345	1,269,853	0.7
1929	305	212,740,031	7,675,521	3.6
1928	294	201,400,196	9,903,048	4.9
1927	268	151,115,208	1,778,260*	1.2*

Notes: * Loss
Gross Sales = Sales plus other Gross Receipts
Net Income - Income after Income Taxes

Source: Tabulation Sheets and published reports (Statistics of Income)
Bureau of Internal Revenue

Twenty Points Code (1924)

Farm income gradually increased from $8,927,000,000 in 1921 to $11,041,000,000 in 1923. Fertilizer manufacturers enjoyed a corresponding increase in tonnage. In spite of the improved business, the fertilizer industry was confronted with a large volume of bad debts contracted in the unwise extension of credit in 1921. As it became more and more apparent that these debts would never be collected and that financial adjustments must be made on the books of the company, there was more and more realization of the need for the effective operation of the code of fair trade practices.

In the years 1922-23 and 1924 each of the companies whose financial records are available had to make surplus adjustments in recognition of these bad debts which adjustments in the aggregate ran into millions of dollars. The losses incurred by the Virginia-Carolina Chemical Company, one of the leading companies in the industry, finally forced that company into receivership in 1924. Shortly thereafter industry leaders met to work out a new code of fair trade practices which would prevent the recurrence of the conditions which had caused these extensive industry losses. The result of these conferences was the adoption of a code known as the Twenty Points Code (*).

The provisions included in these "twenty points" were designed to prevent or at least curtail some of the competitive practices heretofore described and have been excellently summarized as consisting of three "won'ts" and one "will":

> "I won't guarantee prices; I won't ship goods without having a definite understanding as to price: I won't mutilate my own price schedule by secret concessions in price or terms; and I will openly invoice my goods at settlement prices and require settlement as invoiced." (**)

All of the twenty points were not used by all of the companies, each company using such as were applicable in its own section of the country. In the western part of the United States a code of ten and also eleven points was used. In November, 1925 the twenty points were revised in some particulars and a new code of "twenty-one points" was adopted.

The adoption throughout the industry of this code of practices resulted in more uniform prices and a practice of effecting settlements more in accordance with the published price lists and contracts (***).

(*) A detailed description of the so-called Twenty Points Code is contained in Appendix II and is labelled Exhibit 4.

(**) "Annual Address of the President", E. L. Robins, Fourth Annual Convention of The National Fertilizer Association, The National Fertilizer Association 1928, p. 15.

(***) Statement of Industry conditions made to the Court by William J. Donovan, Assistant Attorney General, filed in the District Court of the State of Maryland in the case of United States versus American Agricultural Chemical Company, et al, December 10, 1926.

The method which had been used in 1921 and 1922 in setting prices in the industry was described as follows:

> "All of the large manufacturers issue price lists which give the base prices for the different kinds of fertilizer sold. These lists are published in the spring and fall - that is, where the companies operate in both the wheat growing and cotton sections. The companies selling in the Northern States generally follow the price lists of the American Agricultural Chemical Company and those operating in the southern territory the list prices of the Virginia-Carolina Chemical Company. It appears that in northern territory the Virginia-Carolina Company adopts the price list of the American Agricultural Company while in southern territory the American Agricultural Company follows the list of the Virginia-Carolina Company. . . . . These lists are adopted by the smaller concerns; that is, the list prices are considered maximum prices, the independent companies usually having to shade these prices by a margin of a dollar or a dollar and a half per ton. In 1921 and 1922 price lists were published as usual, but were so high that the companies were unable to maintain such prices for any length of time." (*)

Agricultural income remained fairly steady and the industry under these conditions achieved a volume of over 7,000,000 tons both in 1925 and 1926 with the leading companies all showing relatively good profits.

During 1926, the Department of Justice brought suit (**) against thirty-nine fertilizer companies engaged in the manufacturing of approximately 85 per cent of the fertilizer manufactured in the United States, charging a combination in violation of the antitrust laws to eliminate competition as to terms and conditions of sale. (***)

On December 13 and 21, 1926, the thirty-seven defendants entered pleas of "nolle contendre" and were fined amounts aggregating $90,500, and "nolle prosequi" entered as to the two remaining defendants.

(*) "Fertilizer Industry", Senate Document No. 347, letter from the Acting Chairman of the Federal Trade Commission, transmitting in response to a Senate Resolution of June 7, 1922, a Report on Certain Phases of the Fertilizer Industry, Government Printing Office, 1923, pp. 36, 58 and 59.

(**) United States versus American Agricultural Chemical Co., et al, District Court for the District of Maryland.

(***) A list of the thirty-nine companies referred to is contained in Appendix II of this Report and is labelled Exhibit 5.

Code Sanctioned by Department of Justice (1927)

Apparently simultaneously with the prosecution of the above mentioned suit Industry members were preparing a group of fair trade practice provisions which would meet the criticisms of the Department of Justice. (*)

> "Under the auspices of The National Fertilizer Association and by authority of its Executive Committee a convention of the entire fertilizer industry, including both members and non-members of the Association, was held in Washington, January 10, 1927. At this meeting a code of trade practices, drafted by a special committee of the industry working in contact with the Department of Justice, was unanimously adopted by the 125 firms represented at the meeting. Subsequent to the meeting at which the code was adopted, 180 additional firms in the industry approved the code and promised to live up to it to the best of their ability." (**)

In 1926 there was a sharp drop in the farmer's cash income, especially severe in the case of the cotton crop. The fertilizer industry anticipating a diminished tonnage and keen competition in the Spring selling season of 1927 was anxious to forestall the development of unfair trade practices by the adoption of this code. However, many advance commitments had been made by the time the code was proposed and it took several months to have enough firms sign up to observe the code so that its operation would be really effective. The result was highly demoralized competitive condition which resulted in financial losses for the Industry as a whole.

The effects of these highly competitive conditions in the Spring of 1927 are reflected by the profit and loss figures for the industry. These show that companies doing 56.1 per cent of the sales made an average profit of 5.9 per cent while companies doing 43.9 per cent of the sales lost 10.3 per cent on this volume, a net loss of 1.2 per cent on sales for the entire industry. The industry in general recognized at its annual convention in the summer of 1927 that a stricter observance of the code of fair trade practices was necessary to improve its profits.

In the selling season of 1928, there was an increased agricultural income, especially for the cotton farmers. With the resultant increase in fertilizer tonnage, the industry was more successful in obtaining observance of the code. During that year the income statistics show that 70.1 per cent of the companies selling 94 per cent of the output of those reporting made an average profit of 6.2 per cent on sales. The other 30 per cent of the companies which did only 6 per cent of the business lost 15.9 per cent on their sales, giving the industry an average return of 4.9 per cent on sales and a net income of $9,903,048. This was the best year of any

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(*) A copy of the Code of Trade Practices as adopted January 10, 1927 is contained in Appendix II as Exhibit 6.

(**) Industry Round Table, Proceedings of the Seventh Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1931, p. 54.

year for which these detailed Treasury statistics are available.

Federal Trade Commission - Trade Practice Rules (1929)

In spite of these generally good conditions, a number of operators in the Industry persisted in violating the code of fair trade practices and at the annual convention recognition of this fact was made in the address of the President of The National Fertilizer Association when he stated:

> "It might be wise to ask the Federal Trade Commission for a trade practice conference for the benefit of our Industry and if certain operators persist in unfair trade practice to appeal to the Commission for proper handling." (*)

As a consequence, on November 14, 1928, at the Annual Southern Convention of the fertilizer industry, held in Atlanta, it was voted to request the Federal Trade Commission to sponsor the holding of a trade practice conference. The conference was held in Washington, D. C., on January 29, 1929. The rules as submitted fell into two groups according to the terminology of the Commission; Group I were those rules regarded to be enforceable as a matter of law, while Group II rules were intended to be voluntary rules adopted by the industry as representing sound business practices but not enforceable at law.

While the Federal Trade Commission had the approval of this code under advisement during the Spring of 1929 the industry continued to enjoy an increasing volume of business due largely to an increase in the income of the farmers who purchase fertilizer. The business was, however, done at a lower margin of profit, 3.6 per cent as against 4.9 per cent in the preceding year. This was a reflection of the keener competition for business and the alleged breaking down of the observance of code provisions in the attempt to gain a larger percentage of the available tonnage.

The rules as submitted at the Trade Practice Conference in Washington, January 29, 1929, were approved with only slight changes by the Federal Trade Commission on June 12, 1929 and were presented to and accepted by the Industry at its convention in New London, Connecticut, on June 13, 1929.

The effect of these rules was to modify the code as adopted January 10, 1929. The question of revision was submitted to the convention of the industry in Atlanta, Georgia, November 19, 1929, and a Special Committee on Revision was appointed in order to make the trade practice conference rules as adopted by the Federal Trade Commission an integral part of the code. This was effected by dividing the code into two parts;

(*) "Sound Business Practices, the Key to Profit", by A. D. Strobhar, President, Southern Fertilizer and Chemical Company, Proceedings of the Fourth Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1928, p. 80.

Part 1 approved by the Federal Trade Commission and Part 2 included the voluntary trade practice rules adopted by the industry on its own motion. The latter in a general way were believed to be rules qualified as Group II as submitted to the Commission. In December 31, 1929 the revised code was submitted to the industry for acceptance and 173 firms advised the Executive Secretary of their acceptance there of (*). The Committee completed its work December 31 and thereafter the revised code was submitted to the industry for acceptance (**).

In 1930 the fertilizer industry achieved its maximum tonnage of 8,163,870 tons which is largely a reflection of the fact that the farmer in 1929 had not yet felt the drop in income which he was to incur in 1930. Competition for this tonnage was so keen that the profits derived from this large volume of business amounted to only 0.7 per cent for the industry as a whole.

In 1931, the impace of the depression was really beginning to be felt and sales dropped to 6,306,082 tons, reflecting the drop from $11,941,000,000 to $9,454,000,000 in the farmers' income. Code provisions were ignored to a large extent in the attempt to achieve sales and the Industry as a whole lost 9.3 per cent on sales, or $10,757,377.

Revision of Federal Trade Commission - Trade Practice Rules (1931)

During 1930 and the early part of 1931 considerable discussion had developed throughout the United States concerning the authority of the Federal Trade Commission to approve and enforce trade practice conference rules. The Federal Trade Commission on May 29, 1931 submitted to The National Fertilizer Association a revision in the trade practice conference rules which had been adopted on June 12, 1929. These changes which were accepted by the Industry at its 1931 convention reduced the rules to general language and in the opinion of the industry eliminated the practical application of the rules to the fertilizer industry's problems (***).

IMPACT OF THE DEPRESSION

In 1932, reflecting the 1931 drop in the farmers' income to $6,968,000,000 the fertilizer tonnage dropped to 4,379,350 tons as contrasted to the 1930 peak of 8,163,870 tons. The resultant scramble for business led to such a complete non-observance of the trade practice rules,

(*) "Industry Round Table", Proceedings of the Seventh Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1931 p. 54.

(**) Revised and amended code of trade practices of the Fertilizer Industry as adopted December 19, 1929, incorporating the trade practice rules as approved by the Federal Trade Commission, is contained in Appendix II of this Report and is labelled Exhibit 7.

(***) A copy of these revised trade practice conference rules is contained in Appendix II and is labeled Exhibit 8.

the Secretary of The National Fertilizer Association on November 18, 1932, addressed a letter to the members of the Executive Committee of The National Fertilizer Association, suggesting the abandonment of the code. (*).

The industry lost an even larger percentage on its sales in this year than in the preceding year. These losses were 9.6 per cent as contrasted to 9.3 per cent, although the aggregate losses were only $8,057,105 as contrasted to the larger loss of $10,757,377 in the preceding year due to the decreased sales volume. In this year a profit was reported by companies doing only 16.2 per cent of the business as against 19.5 per cent in the preceding year, and the profit was only 2.7 per cent as compared with 4.2 per cent for the profitable business of the preceding year.

CONDITIONS JUST PRECEDING THE NRA

In approaching the Spring season of 1933, the fertilizer industry did not anticipate very much of a pickup in business as farm income had dropped from $6,968,000,000 in 1931 to $5,337,000,000 in 1932. The normal expectation would have been decreased tonnage of fertilizer and even more severe competition.

There was, however, a change in psychology in anticipation of President Roosevelt's inauguration and the firm conviction that helpful farm aid legislation would be passed. Another contributing factor to an increased sale of fertilizer was the fact that many farmers were seeing the effects of not having used the normal amount of fertilizer in the preceding year and made efforts to increase the amount used in the Spring of 1933.

The net result was that the sales of tax tags in the 17 states reporting them for the first five months of 1933 showed an increase of 476,000 tons or 20 per cent over the comparative figures for the preceding year (**). This then was the condition in which the industry found itself at the time when serious consideration was being given by the Administration to the passage of industrial legislation.

INDUSTRY ORGANIZATION FOR CODE WRITING

As will have been noted in previous paragraphs, the cooperative efforts of members of the industry to stabilize competitive conditions and maintain a price structure had on several occasions resulted in charges of alleged violation of existing anti-trust laws. Industry leaders,

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(*) A copy of this letter which was sent to members of the Executive Committee by the Secretary of The National Fertilizer Association is included in Appendix II to this Report and is labelled Exhibit 9.

(**) Abstract from the Report of Charles J. Brand, Executive Secretary and Treasurer of The National Fertilizer Association to the Board of Directors, Ninth Annual Convention, reported in Proceedings of the Convention published by the Association, p. 94.

therefore, obviously welcomed the opportunity provided by NRA to secure a measure of freedom from this restraint, and to be able to give the force of law to the rules they wished to adopt. When it became apparent that there would be an Industrial Recovery law, the leaders in the fertilizer industry took steps to cooperate with the Government irrespective of the form which the legislation would finally take.

The Independent Fertilizer Manufacturers' Association

The Independent Fertilizer Manufacturers' Association, which had been organized in 1906 by a group of manufacturers of medium size primarily for the purpose of purchasing fertilizer materials on a quantity basis (*), met in Washington on May 17, 1933. A committee of five was appointed to begin the work of drafting a code of fair competition in accordance with the provisions of the Wagner Bill which was introduced to the Senate on May 17. This Bill provided for public works and construction to relieve unemployment and for industry self-regulation through trade associations. This Committee of The Independent Fertilizer Manufacturers' Association was constituted as follows:

A. D. Strobhar, Southern Fertilizer & Chemical Co., Savannah, Georgia, chairman
C. T. Melvin, The Gulf Fertilizer Co., Tampa, Florida
R. P. Benedict, Darling & Co., Chicago, Illinois
Bayless W. Haynes, Wilson & Tooner Fertilizer Co., Jacksonville, Florida
William E. Valliant, Valliant Fertilizer Co., Baltimore, Maryland (**)

The National Fertilizer Association

At this time the National Fertilizer Association was the largest and only national trade association in the industry and represented the type of trade association which most closely met the requirements of NRA as to representative character for the sponsoring of a code for an industry. This association was the nucleus of similar organizations which had existed in the industry since 1883. In 1925, a successor organization was merged with the Southern Fertilizer Association which had been established in 1906, thus forming a truly representative organization which has since then been a constructive force in industry matters (***).

(*) "Fertilizer Industry", Senate Document 347, Federal Trade Commission Report, 1923, Government Printing Office, p. 55

(**) "Report of the Fertilizer Recovery Committee" presented by Horace Bowker, chairman; President, The American Agricultural Chemical Company, Proceedings of Ninth Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1933, p. 41.

(***) At the time of presenting a proposed Code in August of 1933, The National Fertilizer Association claimed a membership of 233 firms or individuals engaged in the industry, This number, however, appears to include other than producers of mixed fertilizers, inasmuch as the Association By-Laws (*) provide

Footnote continued on next page

On May 16 the Executive Committee of The National Fertilizer Association, convening in Washington, appointed a committee of five members, representing the larger companies in the fertilizer industry, to cooperate with the above mentioned committee of The Independent Fertilizer Manufacturers' Association. The members of this cooperating committee were:

Horace Bowker, The American Agricultural Chemical Company, New York City, Chairman
B. H. Brewster, Jr., The Baugh & Sons Co., Baltimore, Md.
C. F. Hockley, The Davison Chemical Company, Baltimore, Md.
L. W. Rowell, Swift & Co., Chicago, Illinois
J. E. Sanford, Armour Fertilizer Works, Atlanta, Georgia

Fertilizer Recovery Committee

It was decided that this Committee and that of the Independent Fertilizer Manufacturers' Association could work more efficiently as one large committee. After merging the committee adopted the name, the "Fertilizer Recovery Committee" and elected Horace Bowker, chairman; A. D. Strobhar, vice chairman; and C. T. Melvin, Secretary.

Designated as Official N.F.A. Committee

This committee at the time of organization was not officially a part of The National Fertilizer Association, although each company represented was a member of the Association. The committee felt that The National Fertilizer Association, being the principal trade association in the industry, should handle the recovery program. The Broad of Directors of the Association was, therefore, asked to designate the Fertilizer Recovery Committee an official committee of The National Fertilizer Association and the Board so voted. (*)

(***) Footnote continued
for two classes of memberships, i.e., Active Membership, including producers of mixed fertilizers and importers of fertilizer materials, and Associate Membership, which included firms and individuals selling raw materials (not importers) or supplies used by mixed fertilizer producers. Only those firms or individuals who were Active Members had a vote in Association matters.

(*) The National Fertilizer Association By-Laws are included in Appendix II as Exhibit 10.

(*) "Report of the Fertilizer Recovery Committee" presented by Horace Bowker, chairman; President, The American Agricultural Chemical Company, Proceedings of Ninth Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1933, p. 41.

After conferring with General Hugh S. Johnson, later Administrator of the National Industrial Recovery Act; with Mr. George N. Peek, Administrator of the Agricultural Adjustment Act; and with Mr. Charles J. Brand in his capacity as co-administrator of the Agricultural Adjustment Act, the sub-committee which was charged with the responsibility of drafting a code, working as closely as possible with every group in the Fertilizer Industry; and utilizing the past experience of the industry in formulating and administering codes, prepared a rough draft of a proposed code.

Draft of Code submitted to Industry

This draft was then submitted to various group meetings of members of the fertilizer industry in practically every geographical section of the country. As a result of these meetings many helpful suggestions were obtained and after the draft had been reworked several times it was presented to the industry at the Ninth Annual Convention of The National Fertilizer Association held at White Sulphur Springs, West Virginia, on June 19, 20, 21, 1933 (*)

It was the opinion of every member of the Fertilizer Recovery Committee that the sooner they could draft their code, submit it and get it approved by the National Recovery Administration, the better off they would be (**). There were presented to the convention certain changes in the By-Laws of The National Fertilizer Association which were designed to facilitate the recovery program. Because of certain technical considerations it was not possible to amend the By-Laws at the convention because of the necessity of giving ten days' notice to members. This change was made on July 1, 1933 at a special meeting at which the amendments were approved.

Authorization for Enlarged Committee

Amendment No. 7 authorized that a new Section 16 be added after Section 15 of Article IV of the By-Laws, to read as follows:

> "Section 16. Fertilizer Recovery Committee. The President with the approval of the Board of Directors, shall appoint a special committee to be known as the Fertilizer Recovery Committee consisting of such number of members as the President may designate from time to time. Such Committee shall have authority to represent the Association in all matters relating to the National Industrial Recovery Act, including the preparation of a Code of Fair Competition for the Fertilizer Industry, a copy of which proposed Code, however, shall be submitted to each member with

(*) The Code presented to and adopted by the Fertilizer Convention subject to revision by the Fertilizer Recovery Committee is incorporated in Appendix II of this Report as Exhibit 11.

(**) "Report on the Fertilizer Recovery Committee" presented by Horace Bowker, chairman; President, The American Agricultural Chemical Company, Proceedings of Ninth Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1933, p. 41

the privilege of his submitting objections within seven days after submission to him, and the submission thereof to the President of the United States for his approval; and including among their things, the employment of engineers, experts and such other persons as they may deem necessary to effectuate such purpose, provided that no expenditures shall be made by such committee in excess of amounts provided for such purpose in the budget, authorized by the Association unless approved by the Board of Directors. Such committee shall have power to elect a chairman from among its members and to designate the number of members which shall constitute a quorum for the transaction of business. Such committee may further delegate its powers to such extent as it may determine to one or more subcommittees of its own members which it may appoint." (*)

Although this amendment to the By-Laws of The National Fertilizer Association was not finally approved until July 1, 1933, the new Fertilizer Recovery Committee was announced at the Sixth Annual Dinner Meeting on June 20, 1933 by Mr. John J. Watson, President, The National Fertilizer Association (**).

Resignation of Representatives of Raw Material Producers

Producers of raw materials were named by Mr. Watson as members of this Fertilizer Recovery Committee as it was the desire of the code sponsors to include within the definition of the industry the production and sale of such raw materials as phosphate rock, nitrogen carriers, potash and sulphuric acid. While the production of phosphate rock and approximately the industry' requirements for sulphuric acid were largely controlled by fertilizer manufacturers, the nitrogen carriers, potash and commercial sulphuric acid which represented two-thirds of the sulphuric acid production of the country were produced by chemical companies who, with the exception of sulphuric acid producers, considered the fertilizer industry the chief outlet for these products and therefore did not desire to be under the code of their principal customer.

The Deputy Administrator was strongly of the opinion the manufacture and sale of sulphuric acid should be covered by the code for the chemical industry and at that time the potash and nitrogen producers each contemplated proposing a code of their own. At the organization meeting of the Fertilizer Recovery Committee held on Wednesday, June 21, 1933, the representatives of the nitrogen, potash and sulphur industries therefore tendered their resignations from the committee. On motion duly made and seconded their resignations were accepted.

(*) "Amendments to By-Laws Approved", Ninth Annual Proceedings of The National Fertilizer Association, The National Fertilizer Association, 1933, p. 52.

(*) The personnel of this new Fertilizer Recovery Committee is detailed in Appendix II and is labelled Exhibit 12.

Recovery Committee Authorized to Complete Code

A resolution was adopted by the Industry at the Fourth Annual Convention which authorized the Fertilizer Recovery Committee to complete the code and file with the President.

During June and July, 1933, several meetings of the members of this committee were held, and after making changes in the preliminary draft to accommodate suggestions and criticisms made by industry members, a proposed code was submitted to NRA under date of August 2, 1933.

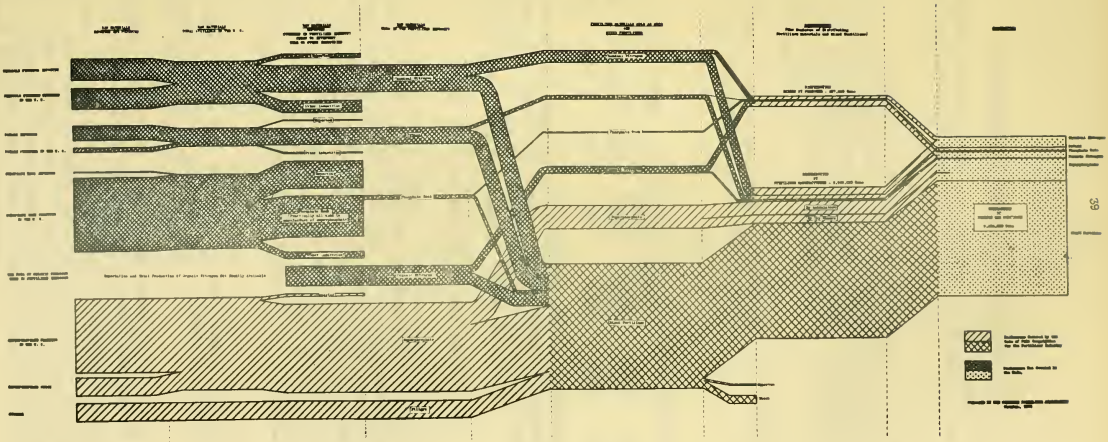
Final Approval of NRA Code

Changes in form and in other respects were requested by NRA and under dates of August 16 and 19, 1933, revised drafts were submitted, the latter draft being noticed for a Public Hearing to be held on September 6, 1933. At the Public Hearing certain changes in the proposed Code were suggested and after additional post hearing conferences the Code was finally approved by the President on October 31, 1933, effective November 10, 1933.

FLOW CHART OF THE INDUSTRY

Chart II is a flow chart of the industry and graphically portrays which portions of the industry came under the code as written.

CHART II



CHAPTER II

RAW MATERIALS AND PRODUCTION PROCESSES

As indicated on Chart II, the production of phosphate rock, potash and nitrogen carriers were not covered by the Code for the Fertilizer Industry.

However, in studying the fertilizer industry, it is essential that we give careful consideration to the sources and prices of these raw materials since they represent the most important factor in the cost of producing mixed fertilizers. In 1933 and 1934, materials represented 63.1 per cent and 62.3 per cent respectively of total cost of manufacturing mixed fertilizer (*).

The following tabulation gives an idea of the trend of the wholesale prices of fertilizer materials in recent years:

TABLE 7

ANNUAL AVERAGE INDEX OF WHOLESALE PRICES OF FERTILIZER MATERIALS (**)
(1929=100)

1926	1927	1928	1929	1930	1931	1932	1933	1934
108.6	104.5	102.6	100.0	92.8	83.4	72.6	71.8	72.8

A review of the drop in raw material prices emphasizes the fact that they were the most important factor in the drop in price of mixed fertilizer over a period of years rather than any great economies effected in the manufacturing and distribution of these products.

PRICE FACTORS AFFECTING RAW MATERIALS

At the present time, prices in the American market for fertilizer raw materials seem to be largely determined on the basis of supply and demand. This has not always been so, as certain countries formerly had natural monopolies of some particular fertilizer raw materials. Cartels still exist which attempt to control the prices of fertilizer materials in various parts of the world. They are not able to do this in the United States due to the fact that we produce a large proportion of our own requirements and have a capacity in time of emergency to take care of our entire demands (***).

(*) "A general Report on Fertilizer Cost and Sales Prices", The National Fertilizer Association, October 26, 1934. (Copy in N.R.A. Files, Fertilizer Industry)

(**) The basic tabulation from which these figures are taken is contained in Exhibit A of the Fertilizer Industry N.R.A. Archives

(***) The United States has always had an adequate supply of phosphate rock. Its independence with reference to nitrogen has been largely due to the development of processes of fixing nitrogen from the air. Potential independence with reference to potash is a development of the past few years in exploiting recently discovered natural resources of New Mexico.

INDUSTRY MAIN USERS OF MATERIALS

The fertilizer industry uses the predominant portion of the annual output of each of the fertilizer materials which go to make up the component parts of a mixed fertilizer. The percentage used by the fertilizer industry varies from year to year due to various factors such as alternative uses of particular materials, prices, etc. An indication of the importance of the fertilizer industry in the consumption of these materials is indicated by the fact that, in 1934, the fertilizer industry used 70 per cent of the total consumption of chemical nitrogen in the United States; 92 per cent of the potash materials; and 81 per cent of the phosphate rock.*

FUNCTION OF FERTILIZER ELEMENTS

Nitrogen, Phosphorus, and Nitrogen

The three main elements contained in fertilizer materials are each important to a growing plant for different reasons. Nitrogen produces rapid development of the leaf and other vegetative parts of the plant and hastens the blooming period of such crops as cotton. Phosphoric acid stimulates early root growth and is, therefore, useful in promoting the early maturity of crops. It also stimulates the growth of fruits and seeds as compared with mere vegetative growth. Potash stimulates the formation of starch, gives stiffness and rigidity to the stem or stalk of the plant and aids it in its general healthful development which promotes disease resistance.

Other Fertilizer Elements

Soils ordinarily contain sufficient quantities of other elements beneficial to plant growth although one of the points of emphasis in recent fertilizer manufacture is an increasing amount of attention to the inclusion of other chemical elements such as magnesium, calcium, sulphur, etc., in which particular soils are found deficient. As yet, the quantities of these other elements used have not reached sufficient size to be an important commercial factor in the consumption of such chemical elements.

FERTILIZER GRADES

There were 1,053 different combinations of fertilizer materials sold in the United States in 1934** and each analysis or grade has a

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(*) J. W. Turrentine, "Potash", Mineral Industry, 1935, McGrow Hill Publishing Company, New York, Tables pp. 475-476.

"Crude Phosphates and Superphosphate", United States Tariff Commission, Report No. 100, Second Series, 1935, Table 1, p.4.

"World Production and Consumption of Fixed Nitrogen", Chemical & Metallurgical Engineering, Vol. 42, No. 1, p. 54.

(**) National Fertilizer Association Proceedings Eleventh Annual Convention, The National Fertilizer Association, 1935, Table II, p. 145.

separate designation to identify it. The customary method is to express the percentage of different plant foods in a given fertilizer in a series of numerals such as 3-8-3 which ordinarily expresses percentage and means respectively 3 per cent nitrogen, 8 per cent phosphoric acid (P_2O_5), and 3 per cent potash (K_2O). This particular formula happens to be a popular grade of fertilizer for cotton and per ton of this grade would contain 60 pounds of nitrogen, 160 pounds of available phosphoric acid, and 60 pounds of potash, making a total of 280 pounds of plant food per ton of fertilizer.

USE OF FILLERS IN FERTILIZERS

Some misinformed critics assume because there is only 280 pounds of available plant food in the above mentioned fertilizer that the balance consists of fillers. As a matter of fact the bulk of the remaining content of the ton of fertilizer consists of materials that are naturally present as a part of the chemicals used in making mixed fertilizer. Every hundred pounds of chemically pure nitrate of soda contains 83.53 per cent of natural materials that are necessarily present in chemical combination with the nitrogen which makes up the remaining 16.47 per cent.

The customary and standard strength of this superphosphate is 16 per cent or 320 pounds per ton of available phosphoric acid. The remaining 1,680 pounds are not materials added but are materials which occur naturally in phosphate rock and that in the present processes of producing superphosphate by the use of sulphuric acid remain mixed with the superphosphate so produced.

Similarly the potassium, although expressed in terms of potassium oxide (K_2O), is not used as such but occurs in the form of potash salts. These salts are mixed with various chemical impurities in their natural state and are ordinarily used in mixed fertilizers with a large percentage of such impurities still contained with the potash salts.

It is true that fillers, that is, materials other than those naturally coming with raw materials used, are sometimes added to fertilizers and technically are known as fillers and conditioners. The fillers as such have no value as a plant food but certain materials such as finely ground limestone, pulverized peat, etc. are alleged to condition the soil. It is also alleged that fillers assist in making the fertilizer more readily adapted to machine spreading and are therefore necessary in the manufacture.

PLANT FOOD CONTENT OF FERTILIZER MATERIALS

The following tabulation is self explanatory and gives an idea of the plant food content of each of the leading fertilizer materials.

TABLE 8

PLANT FOOD CONTENT OF FERTILIZER MATERIALS *

Material	Nitrogen (N) Per Cent	Phosphoric Acid (P_2O_5) Per Cent	Potash (K_2O) Per Cent
Bone	1.6 - 4	20-25	0
Basic Slag	0	10-25	0
Superphosphate	0	14-20	0
Triple Superphosphate	0	40-50	0
Kainit	0	0	12.4-16
Manure Salts	0	0	20 - 30
Muriate of Potash (Potassium Chloride)	0	0	50 - 60
Sulphate of Potash (Potassium Sulphate)	0	0	48 - 50
Ammonia	82.2	0	0
Sulphate of Ammonia (Ammonia Sulphate	20- 21	0	0
Ammonium Sulphate-nitrate	26	0	0
Nitrate of Soda (Sodium Nitrate)	15.6-16	0	0
Nitrate of Lime (Calcium Nitrate)	15.5	0	0
Nitrate of Ammonia (Ammonium Nitrate)	34.5	0	0
Cyanamide	20 - 25	0	0
Urea	46	0	0
Calurea	34	0	0
Cottonseed meal	5 - 7	2- 3	1.5-2
Dried blood	9 - 14	0	0
Tankage	5 - 10	3.5-14	0
Garbage Tankage	2.5-3.3	2- 5	.5-1
Fish Scrap	6.6 10	4 -8	0
Ammo-phos	11 - 16.5	20 -46	0
Nitrophoska	15 -16.5	11 -30	15-26

AVERAGE PLANT FOOD CONTENT OF MIXED FERTILIZERS

There has been a constant trend toward increasing the percentage of plant food in mixed fertilizer over a period of years. In 1910 the average plant food content was 14.1 per cent.** In 1934, the average plant food content was 18.17 per cent and consisted of an average 3.51-9.24 - 5.42 per cent of nitrogen, phosphorus (P_2O_5) and potassium (K_2O), respectively.***

(*) Table derived from information contained in "Code Application, submitted by National Fertilizer Association to the National Recovery Administration", August 2, 1933, p. 2. (Copy in N.R.A. Fertilizer Industry Files).

(**) "Changes in Composition of American Fertilizers, 1880-1932" U.S. Department of Agriculture Bulletin 315, April, 1934, Table 3,p.4.

(***) National Fertilizer Association plant food survey for year ending June, 1934, Proceedings of The National Fertilizer Association for 1933, Table 11, pp. 196-197.

The figures of value per ton of mixed fertilizer sold do not give a true picture of the increased value to the farmer unless we consider the increased plant food in the fertilizer sold in recent years. To make a hypothetical calculation, 7,132,000 tons of fertilizer would have been necessary in 1934 if the fertilizer sold in that year contained the same percentage of plant food as did that sold in 1910. Five million five hundred thirty-three thousand tons of fertilizer were actually sold in 1934.

CONCENTRATED FERTILIZERS

In the opinion of some members of the industry this tendency toward a higher plant food content has only just begun. In a conference with Dr. J. W. Turrentine, President, American Potash Institute, Inc., November 15, 1934, he pointed out that they have made a satisfactory fertilizer with as high as 85 per cent plant food content by utilizing a mixture of ammonium phosphate and potassium nitrate.*

The use of such highly concentrated fertilizers requires the use of a different method of mechanical application and new equipment for the farmer for its application so that we may look forward to further and possible revolutionary development along these lines.

Chart III** portrays graphically the trend in the average composition of complete mixed fertilizer since 1880.

NITROGEN CARRIERS

Alternative Sources of Supply

The variety of materials, both domestic and imported, used as sources of nitrogen have made it practically impossible for any group to control their price. While it is true that each particular nitrogen carrier has characteristics which make it especially desirable for particular crops, they are sufficiently alike in their use as fertilizer to cause a substitution of one for the other if a difference in price makes it desirable.

Organic Versus Inorganic Nitrogen Carries

The organic nitrogen carriers, namely, those derived from vegetable or animal matter and which include cotton seed meal, tankage, dried blood and fish scrap are essential constituents in fertilizer

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(*) A more detailed discussion of the production of more concentrated forms of superphosphate is contained in the special section of this chapter devoted to that subject. A more detailed discussion of the consumption of fertilizer and plant food in the United States is contained in the chapter on Distribution and Prices.

(**) Reproduced from "Progress in Fertilizer Technology Described by Kunsman", The Fertilizer Review, The National Fertilizer Association, Vol. IX. No. 2, p. 7.

used for some crops but have alternative uses such as cattle feed. Such materials have been diminishing in importance as fertilizer materials as contrasted with the use of the inorganic nitrogen carriers. Organic nitrogen in general becomes available to the plant more slowly than does inorganic nitrogen. Organic nitrogen carriers are used particularly on tobacco and to some extent on cotton.

INORGANIC NITROGEN CARRIERS

The most important inorganic nitrogen carriers are nitrate of soda and sulphate of ammonia. The principal advantage in the use of these materials over organic carriers lies in their ready solubility in water which makes their nitrogen content more quickly available as plant food. While for some crops a more slowly available nitrogen is desirable, nitrate of soda is considered an excellent top dressing for such crops as citrus fruits, cotton, sugar beets, etc.

The production of nitrate of soda was formerly a natural monopoly of Chile, but today, due to the above mentioned development of processes for the fixation of nitrogen from the atmosphere, synthetic sodium nitrate is a very real competitor of the natural product. Although the United States has the capacity to produce its entire requirements of sodium nitrate syntheticallly, Chilean nitrate is still imported due in a large measure, to the inertia of the farmer in changing his habits. Another reason has been the effective propaganda of the Chilean nitrate producers who have sold some farmers on the idea that the impurities of the natural product make it more desirable than the more chemically pure synthetic product.

Chart IV * graphically illustrates the relative world production of atmospheric nitrogen and of Chilean nitrate from 1923 to 1933.

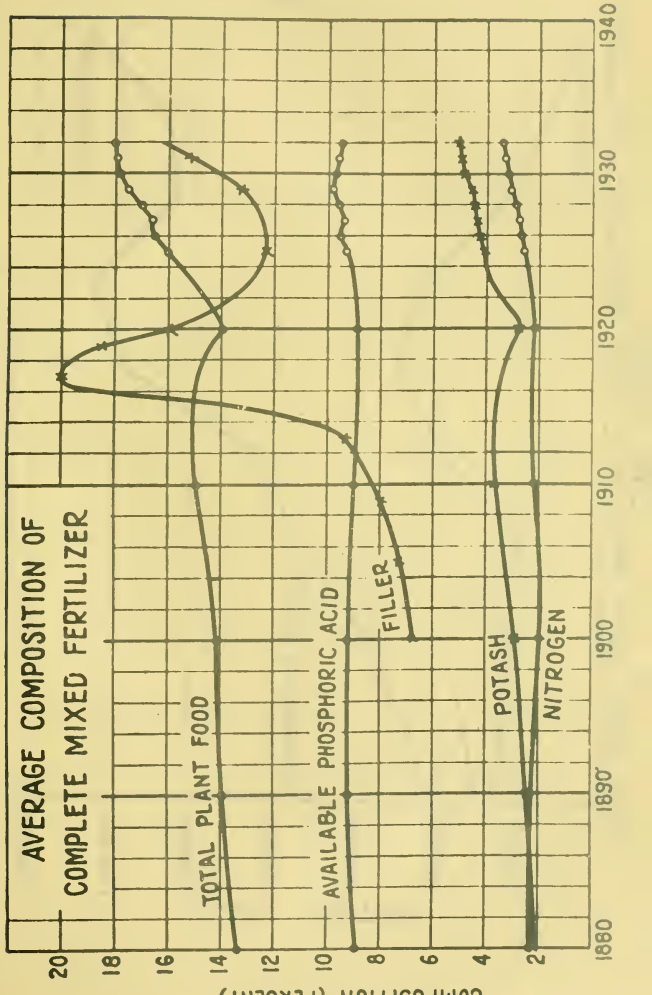
Sulphate of ammonia while it can be produced synthetically, is largely a by-product of the steel industry. Here the supply is determined by the extent of the manufacture of another product and the sales price is not the determining factor in the quantity offered for sale.

Supply of Chemical Nitrogen

The total supply of chemical nitrogen in the United States from the year 1930 to 1934 is indicated in the following tabulation:

(*) Reproduced from "An Editorial", Journal of Industrial and Engineering Chemistry, February, 1934.

CHART III


AVERAGE COMPOSITION OF
COMPLETE MIXED FERTILIZER
TOTAL PLANT FOOD
AVAILABLE PHOSPHORIC ACID
FILLER
POTASH
NITROGEN
COMPOSITION (PERCENT)
20
18
16
14
12
10
8
6
4
2
1880
1890
1900
1910
1920
1930
1940

WORLD PRODUCTION OF ATMOSPHERIC NITROGEN AND OF CHILEAN NITRATE.

(In Tons of Nitrogen)

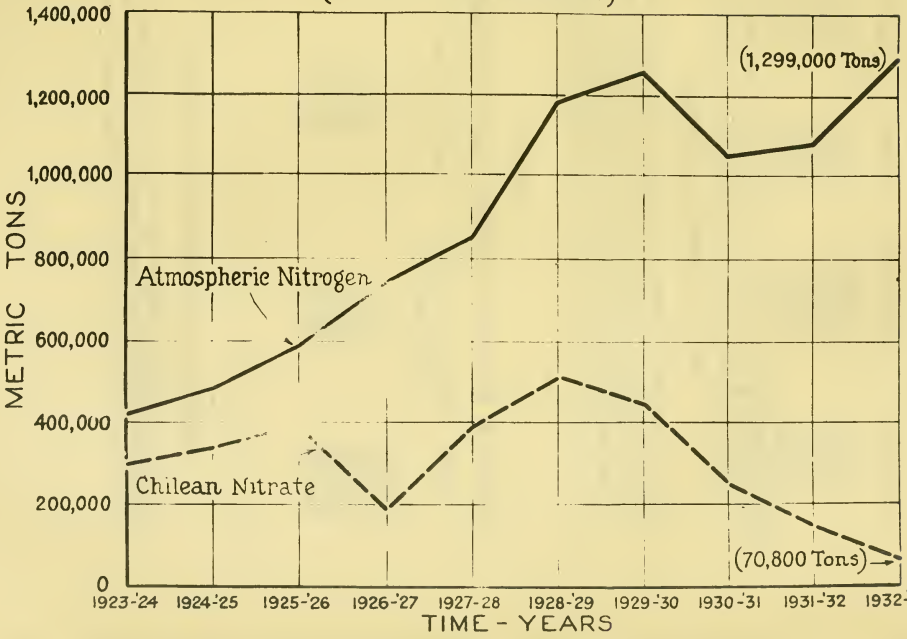


CHART IV

TABLE 9

PRODUCTION AND IMPORTS OF CHEMICAL NITROGEN IN SHORT TONS IN THE U.S.(*)

Year	By-Product	Synthetic	Imports (Net)	Total Supply
1930	164,250	135,000	136,800	436,050
1931	117,130	66,000	118,300	301,430
1932	76,300	89,000	65,000	230,300
1933	93,000	114,000	105,600	312,600
1934	93,000	127,000	99,500	319,500

(*) "Recovery in the Fertilizer Industry", Charles J.Brand, The Fertilizer Review, The National Fertilizer Association, Vol. X, No. 2, p. 7.

Consumption of Chemical Nitrogen

The following tabulation shows the estimated consumption of chemical nitrogen in short tons in the United States for the years 1930 to 1934. Since all nitrogen which is used in the United States is not used for fertilizer purposes, this tabulation has been broken down to show the amount used for fertilizer and that used for military and other purposes:

TABLE 10

ESTIMATED CONSUMPTION OF CHEMICAL NITROGEN IN SHORT TONS IN THE U.S.(*)

Year	For Fertilizers	For Industries and Military Uses	Total
1930	294,000	110,000	404,000
1931	202,000	90,000	292,000
1932	162,000	65,000	227,000
1933	185,000	90,000	275,000
1934	232,000	100,000	332,000

(*) Ibid

Consumption of Materials Supplying Nitrogen

The following tabulation shows the various fertilizer materials which were used as sources of nitrogen and the respective amounts derived from each of these sources for the years 1930 to 1932 inclusive:

TABLE 11

ESTIMATED CONSUMPTION OF PLANT FOOD IN THE UNITED STATES, 1930-32 (*)

(Including Hawaii and Puerto Rico)

A-NITROGEN (Short tons of nitrogen contained):

	1930	1931	1932
Chemical Sources:			
Nitrate of soda	98,580	55,750	23,750
Sulphate of ammonia	124,000	97,400	108,150
Calcium cyanamid	15,750	12,000	8,800
Ammonia	30,000	20,170	13,040
Calcium nitrate	7,370	4,830	1,150
Ammonium sulphate-nitrate	2,380	--	--
Urea and calurea	6,340	3,980	1,700
Ammonium phosphates	9,230	7,910	5,060
TOTAL CHEMICAL	293,650	202,040	161,650
Natural Organics:(**)			
Cottonseed meal	13,500	16,350	31,900
Packing house by-products	8,100	5,640	3,850
Fish scrap and meal	2,800	3,050	1,960
Guano	3,600	3,090	3,080
Rough ammoniates	20,500	15,600	11,230
Other nitrogenous materials	8,290	4,670	3,060
TOTAL NATURAL ORGANICS	56,790	47,400	54,080
TOTAL NITROGEN	350,440	249,440	215,730

(*) Includes potash content of organics, nitrophoska, nitrate of potash, etc.

(**) Application of National Fertilizer Association for Code. (Copy in NRA Fertilizer Industry Files)

Chart V (*) graphically shows the source of nitrogen in mixed fertilizers since 1880 and clearly portrays the decline in relative importance of the organic nitrogen.

EXPORTS OF NITROGEN

The following tabulation shows the exports of nitrogen carriers from the United States:

(*) Reproduced from "Progress in Fertilizer Technology Described by Kunsman", The Fertilizer Review, The National Fertilizer Association, Vol. IX, No. 2, p. 6.

TABLE 12

EXPORTS (*)

	Total Nitrogenous Fertilizers		Ammonium Sulphate		Other Nitrogenous Chemical Material		Nitrogenous Organic Waste Material	
	Tons	$1,000	Tons	$1,000	Tons	$1,000	Tons	$1,000
Average 1926-1930	143,105	6,800	127,851	6,046	15,254	754		
Annual								
1926	190,764	10,390	181,125	9,824	9,639	566	n.s.	n.s.
1927	147,643	7,319	138,692	6,827	8,951	492	n.s.	n.s.
1928	100,737	4,697	93,015	4,373	7,772	324	n.s.	n.s.
1929	169,119	7,526	144,761	6,296	24,358	1,230	n.s.	n.s.
1930	107,214	4,069	81,662	2,910	25,552	1,159	n.s.	n.s.
1931	138,614	4,828	66,902	2,220	65,829	2,479	5,883	129
1932	190,650	4,921	14,742	480	166,981	4,357	8,927	156
1933	116,721	2,729	14,357	362	91,348	2,152	11,157	215
1934	200,357	4,940	25,629	714	158,015	3,805	16,713	421
7 mo.1934	92,231	2,284	8,554	237	75,009	1,827	8,668	220
7 mo.1935	70,692	1,686	25,603	686	39,788	910	5,572	90

n.s. Not specified

(*) Tabulated from Foreign Commerce and Navigation of the United States and Monthly Summary of Foreign Commerce of the United States.

Nitrogen Prices

The great drop in recent years in prices of the leading inorganic sources of nitrogen is detailed in the tabulations appearing in Tables IX A, B and C of Appendix II, Exhibit 2, pp. 15-18.

Chart VI (*) graphically shows the annual average spot price per unit of nitrogen in various materials at producing points. This chart clearly reveals the higher cost of the nitrogen from organic sources and partially explains its diminished use in fertilizers in recent years.

POTASH

Materials Containing Potash

The potassium used in commercial fertilizers comes largely in the form of potash salts, which usually consist either of the chloride or the sulphate of potash. Certain of the lower grade potash salts are

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(*) Reproduced from "Progress in Fertilizer Technology Described by Kunsman", The Fertilizer Review, The National Fertilizer Association, Vol. IX, No. 2, p. 6.

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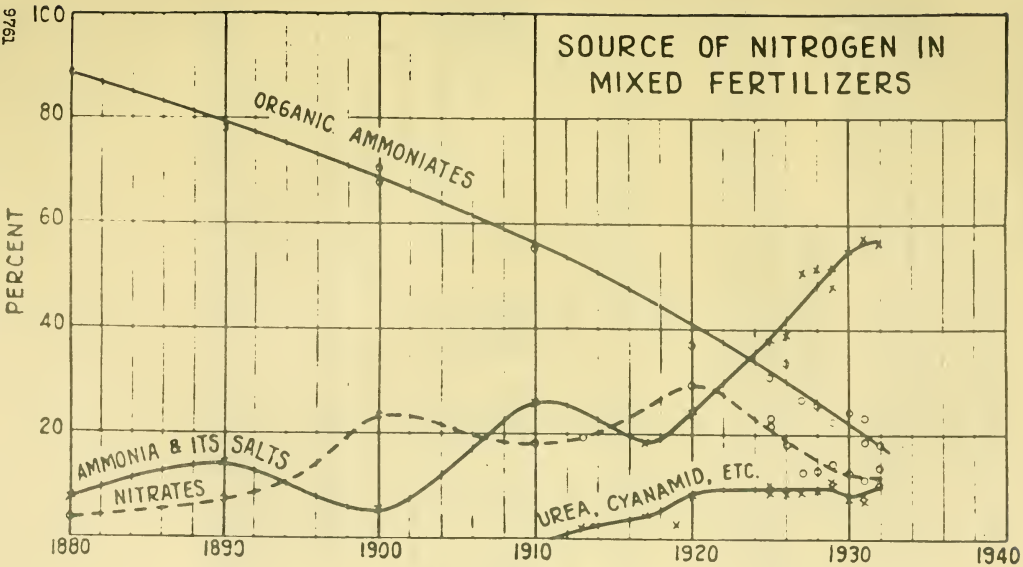
SOURCE OF NITROGEN IN MIXED FERTILIZERS
PERCENT
100
80
60
40
20
ORGANIC AMMONIATES
AMMONIA & ITS SALTS
NITRATES
UREA, CYANAMID, ETC.
1880
1890
1900
1910
1920
1930
1940

CHART V

known as manure salts and kainite. The chloride of potash is often known as muriate of potash.

Basis of Comparison of Potash Materials

Since potash salts differ widely in their purity and in their potassium content, a common method has been set up to evaluate the potassium content of materials and fertilizers. This is done by reducing the potassium content of a particular material to a so-called K_2O equivalent basis which gives a basis of comparing the prices of different potash materials.

Domestic Consumption of Potash

The following tabulation indicates the sales of fertilizer potash in the United States from 1930 to 1934 reduced to the K_2O equivalent basis and designating the materials and the amounts derived from each particular source:

TABLE 13

SALES OF FERTILIZER POTASH IN UNITED STATES, 1930-1934 (*)
(Estimated short tons K_2O by salts)

Salts	1930	1931	1932	1933	1934
Muriate	209,610	121,490	83,500	151,000	149,000
Sulphate	46,080	33,860	15,090	28,200	29,600
Manure salts	91,125	68,495	41,500	95,400	40,900
Kainite	15,625	10,890	6,915	6,800	23,500
Other potash materials (a)	8,740	20,615	17,940	10,000	13,000
Total potash	371,180	255,350	164,945	291,400	256,000

(a) Includes nitrate of potash, "vegetable" potash, etc.

(*) "Potash", by Dr. J. W. Turrentine, Mineral Industry, Volume 43, 1934, McGraw Hill Publishing Company, New York City, p. 479.

The following tabulation shows the potash produced and sold in the United States since 1925, expressed both in actual tonnage and K_2O equivalent together with the value of sales f.o.b. the plant:

CHART VI

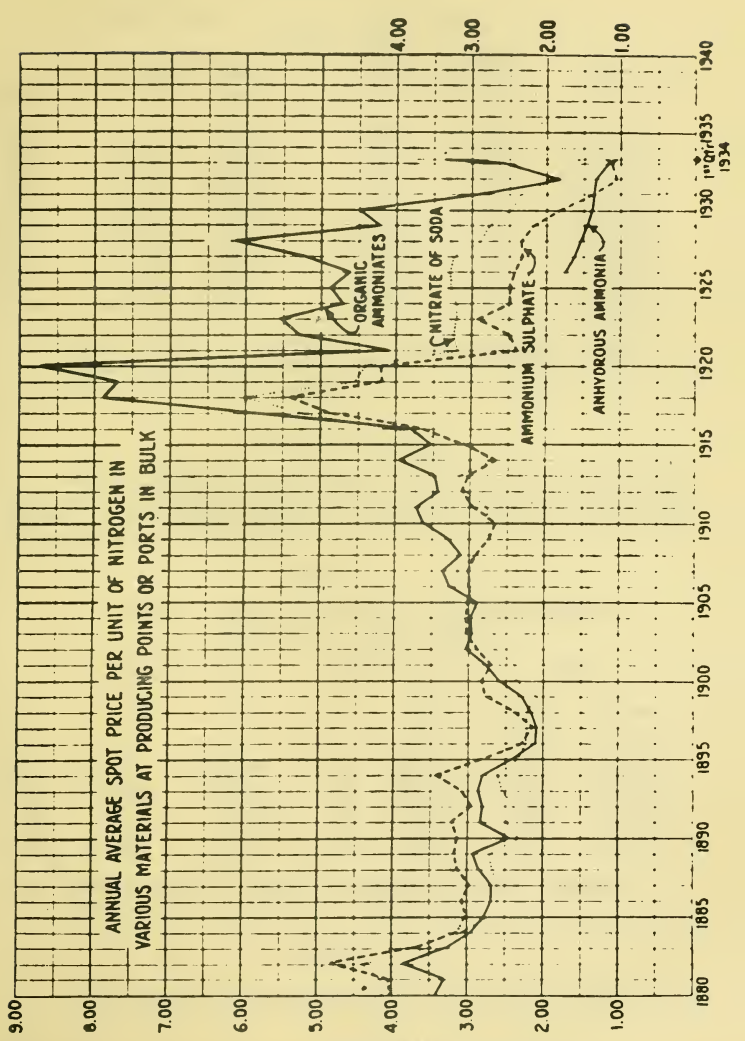
ANNUAL AVERAGE SPOT PRICE PER UNIT OF NITROGEN IN VARIOUS MATERIALS AT PRODUCING POINTS OR PORTS IN BULK
DOLLARS PER UNIT OF NITROGEN
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
4.00
3.00
2.00
1.00
1880
1885
1890
1895
1900
1905
1910
1915
1920
1925
1930
1934
1935 1st Qr.
1940
ORGANIC AMMONIATES
NITRATE OF SODA
AMMONIUM SULPHATE
ANHYDROUS AMMONIA

TABLE 14

POTASH PRODUCED AND SOLD IN THE UNITED STATES (*)
(In short tons)

Year	Production Potash Salts	Production Equivalent	Sales Potash Salts	Sales Equivalent	Value f.o.b. Plant
1925	51,565	25,448	52,823	25,802	1,204,034
1926	46,324	23,366	51,369	25,060	1,083,064
1927	76,819	43,150	94,722	49,500	2,648,146
1928	104,129	59,910	105,308	60,370	3,029,422
1929	107,800	61,590	101,370	57,540	2,988,450
1930	105,810	61,270	98,280	56,610	2,986,160
1931	133,920	63,880	133,430	63,770	3,086,955
1932	143,120	61,990	121,390	55,620	2,102,590
1933	351,250	148,150	334,417	138,770	5,225,646
1934	429,300	150,700	320,690	113,250	2,825,650

(*) "Potash", by Dr. J.W. Turrentine, Minneral Industry, Volume 43, 1934, McGraw Hill Publishing Company, New York City, p. 475.

Exports of Potash

Since in recent years the potash industry of the United States has been developed rapidly, our exports of potash salts have assumed significance. The following tabulation shows the potash salts exported from the United States since 1929.

TABLE 15

POTASH MATERIALS EXPORTED FROM THE UNITED STATES (*)
(In long tons, potash salts)

Year	Fertilizer Salts Tons	Fertilizer Salts Value	Chemical Salts Tons	Chemical Salts Value	Total Tons	Total Value
1929	13,868	$582,690	1,311	583,668	15,180	$1,166,358
1930	15,216	643,367	1,121	498,774	16,337	1,142,141
1931	28,982	1,267,120	1,030	370,935	30,012	1,638,055
1932	1,816	70,028	791	241,179	2,607	311,207
1933	25,117	910,406	1,138	301,596	26,255	1,212,002
1934	25,540	918,205	2,120	466,393	27,660	1,385,098

(*) "Monthly Summary", Bureau of Foreign and Domestic Commerce, Department of Commerce.

Imports

The following tabulation represents the fertilizer potash imported

for consumption into the United States from 1924 to 1934 expressed in short tons of K_2O equivalent.

TABLE 16

POTASH IMPORTED FOR CONSUMPTION IN THE UNITED STATES (*)
(In short tons of K_2O)

1924	200,365	1928	297,000	1932	113,500
1925	258,200	1929	335,000	1933	138,760
1926	238,000	1930	318,900	1934	143,500
1927	224,973	1931	215,524		

(*) "Potash", by Dr. J. W. Turrentine, Mineral Industry, Volume 43, 1934, McGraw Hill Publishing Company, New York City, p. 478.

For three years these figures are broken down to show the particular salts and their approximate K_2O content, together with the value of each of the salts in the following tabulation.

TABLE 17

POTASH MATERIALS IMPORTED FOR CONSUMPTION IN THE UNITED STATES (*)

sed Principally n fertilizers:	Approximate K_2O content (PerCent)	1932 Long Tons	1932 Value	1933 Long Tons	1933 Value	1934 Long Tons	1934 Value
Kainite	14-20	49,374	$457,318	101,989	$968,326	113,898	$1,105,807
Manure Salts	30	100,927	1,254,720	115,121	1,329,423	79,283	1,039,074
Muriate	30	78,352	2,794,979	105,538	3,791,789	126,964	3,671,857
Sulphate	48	28,071	1,201,571	59,325	2,261,890	61,786	1,949,997
Nitrate	35	.....	.....	25,593	880,493	31,614	1,071,498
Other Potash-bearing substances	..	3,727	188,452	449	6,158	352	2,551
		260,457	5,897,040	406,015	9,238,079	413,897	8,840,784

Domestic Production

Percentage of U. S. Consumption Domestically Produced

In reviewing the various tabulations above, it is seen that the potash consumption in the United States for 1934 was approximately 653,000 short tons of potash salts, equivalent to 256,000 short tons of K_2O. This figure is calculated by subtracting the exports from the total of imports and domestic sales. The imports represented 68 per cent in gross weight and 56 per cent in terms of K_2O equivalent. Assuming that exports represented exclusively high analysis domestic muriate of 60 per cent K_2O, approximately 40 per cent of the potash consumed in the United States was of domestic origin in 1934.

Domestic Production

As indicated previously, the domestic production is largely concentrated in the States of California and New Mexico. The California plant is located at Searles Lake and is owned by the American Potash and Chemical Company, whereas there are two plants at Carlsbad, New Mexico, owned by the United States Potash Company and the Potash Company of America, respectively.

(*) "Monthly Summary," Bureau of Foreign and Domestic Commerce. Department of Commerce.

The first named plant has been in operation since 1912. It produces potassium chloride by fractional crystallization from the saturated complex brine of this prehistoric lake. The two New Mexico plants are mines extracting sylvinite which is a mixture of potassium and sodium chlorides. It is estimated that New Mexico has potash deposits sufficient to supply the needs of the United States for 200 years. (*)

History of the U. S. Search for Potash

Beginning in 1910, the Congress of the United States appropriated funds for a national survey of fertilizer resources. Under this Act of Congress which inaugurated the study of fertilizer resources, a nation wide search was made for potash. The Congress realized the necessity of national self-sufficiency in potash in the event of war since the United States was importing practically all of its potash requirements from Germany. Germany had great natural deposits of these salts which gave that country a virtual natural monopoly, prices and production being controlled through the operation of cartels.

The explanation of the development of the domestic potash industry in this country is facilitated by Chart VII which shows graphically the domestic production, consumption and prices of potash. (**)

War Time Prices of Potash

Chart VII indicates what happened to the price of potash when the World War cut off supplies from Germany. The price soared from about 60 cents per unit of K_2O to about $4.30 per unit, with a corresponding decline in the use of K_2O in fertilizers in this country, since we had no substantial domestic production.

This high price of K_2O stimulated an aggressive war time effort to relieve our potash scarcity. It is reported that there were in operation or ready for production of potash, at the close of the war 62 commercial units. Of this number 29 were crystallizing potash from the brines of saline lakes and marshes; 9 were processing kelp; 3 were extracting potash from alunits; 2 from green-sand; 1 from leucite; 13 from cement kiln fumes; 4 from blast furnace fumes; and 1 from distillery waste. (***)

(*) "Application for a Code, made by The National Fertilizer Association to the National Recovery Administration," August 2, 1933, p. 9. (Copy in N.R.A. Fertilizer Industry Files)

(**) Price series for individual potash materials are detailed in the Fertilizer Industry Archives Exhibit A, Table IX, Sections D, E, F and G, pp. 19-26.

(***) C. A. Brown, Assistant Chief, Bureau of Chemistry and Soils, United States Department of Agriculture ---"Production and use of Potash"---Proceedings of 11th Annual Convention of The National Fertilizer Association, The National Fertilizer Association, p.98.

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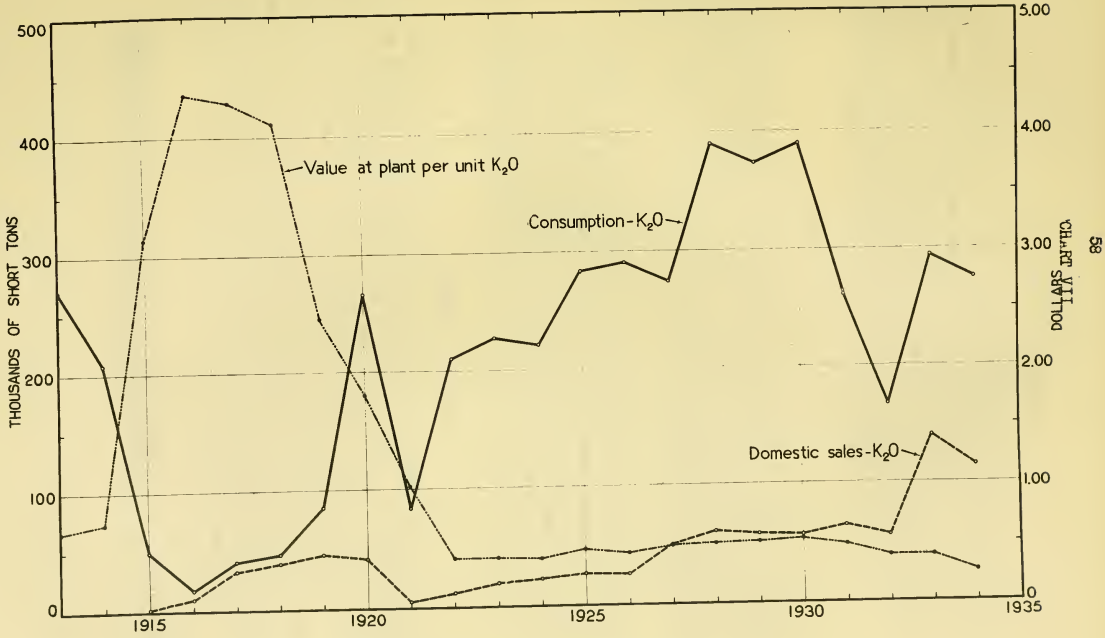

TRENDS IN DOMESTIC SALES, CONSUMPTION, AND VALUE OF POTASH, (K_2O), 1913-34.

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Post War Conditions

The consumption of potash dropped off sharply due to the inadequate supply and high price and was supplied mainly by domestic production. The release of the German source of supply at the end of the war caused a sharp drop in price with increased consumption in the United States. By 1921, with the decreased demand due to the agricultural depression, domestic producers of potash had been virtually wiped out of the market due to their high cost of production. By 1922, the price was stabilized around 40 cents per unit of K_2O.

Agitation for a Tariff

There are no tariffs on fertilizer materials or mixed fertilizers at the present time. There has been agitation for a tariff by domestic producers of nitrogen and potash carriers at various times. The development of the domestic supply of potash caused much agitation for the protection of a new industry immediately following the low prices after the war. The following quotation illustrates the situation and gives a picture of the activities of the fertilizer manufacturers.

> "Mainly through the efforts of our association, potash was retained on the free list in the tariff act of 1922. The tariff rates on potash agreed to in the House of Representatives on the first vote on that bill called for the payment of customs duties for a period of five years amounting to about $51,300,000. We shall need to be alert in succeeding sessions of Congress to safeguard the traditional wise policy of free entry for all plant foods." (*)

Current Situation

The price of potash later advanced to as much as 50 cents per unit but by 1933 was again reduced to 40 cents per unit. It declined from that level subsequently to as low as 25 cents per unit in 1934, which is the lowest average value at the plant both per ton and per unit of K_2O ever realized by domestic producers. Incidentally, the price cut of 1934 was instituted by one of the American companies and was a reflection of the increased domestic production as this was the first break from the price leadership of the European cartels. Thus the fertilizer manufacturers have had a very low unit cost for the potash constituent of their mixed fertilizers, and this should in the long run tend to increase the use of potash as a fertilizer material.

(*) Report of Washington Joint Office, Proceedings of the Third Annual Convention of the National Fertilizer Association, The National Fertilizer Association, June 1927, p. 60.

PHOSPHATE PRODUCTS

Industry Financially Interested in Phosphate Manufacture

The fertilizer manufacturers have a more direct financial interest in phosphate products than in either nitrogen or potash materials. With regard to the latter products, the American manufacturer of fertilizer is essentially a distributor buying and selling them, largely as adjuncts to the phosphate products which he is actually manufacturing. As pointed out previously, not all fertilizer mixers manufacture superphosphate but the industry as a whole has the bulk of its capital invested in manufacturing phosphate products.

Location of the Superphosphate Industry

The trend toward concentrated fertilizer is of especial interest to the producers of phosphate products. The industry as now situated is in large measure set up on the basis of producing a superphosphate which contains from 16 to 20 per cent of available phosphoric acid. This has meant that the manufacture of superphosphate has always been a more or less localized industry because it is usually more economical to ship phosphate rock containing from 30 to 34 per cent of phosphoric acid than to ship superphosphate containing from 16 to 20 per cent. Thus the plants have been located at strategic points in the heavy fertilizer-consuming areas where long rail hauls of the finished product are not necessary.

The reason for the lower percentage of available phosphoric acid in superphosphate than that contained in the raw material is due to the fact that each long ton of phosphate rock is treated with a short ton of sulphuric acid (*) in order to make the phosphoric acid available as a plant food. The phosphoric acid in the monocalcium phosphate of the resultant product is therefore accompanied by a calcium sulphate (gypsum) which is of questionable value as a fertilizer in any such quantities as contained in ordinary superphosphate.

Sulphuric Acid

One hundred fertilizer plants produce sulphuric acid. The fertilizer industry consumes approximately 30 per cent of all sulphuric acid manufactured in the United States. The fertilizer industry produces about the same amount of sulphuric acid as it consumes but there is some interchange with commercial acid producers. Chart VIII portrays this situation graphically. (**)

(*) One hundred fertilizer manufacturers manufacture sulphuric acid. The Industry consumes approximately 30 per cent of all sulphuric acid manufactured in the United States, the Industry producing about as much sulphuric acid as it consumes, although there is some interchange with commercial producers. Taken from Exhibit A Table 7, pp. 12-13. The Fertilizer Industry, NRA Archives.

(**) The statistics on which this chart is based are contained in Appendix II as Exhibit 13. Additional statistics on sulphuric acid are contained in The Fertilizer Industry NRA Archives. Exhibit A, Table 7, pp. 12-13.

CHART VIII

DEPARTMENT OF COMMERCE

FOR RELEASE ON RECEIPT

BUREAU OF THE CENSUS

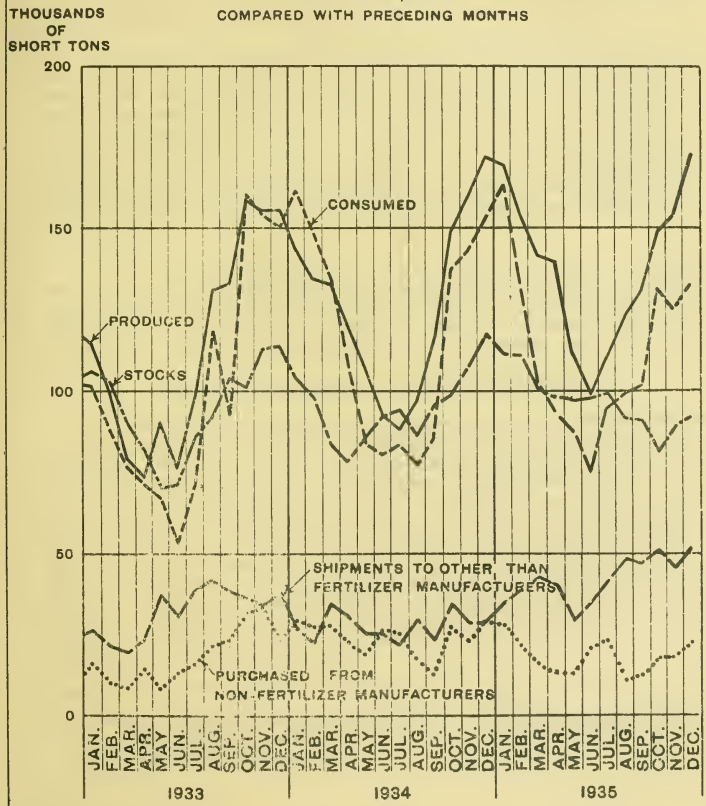
WASHINGTON

SULPHURIC ACID

PRODUCTION, STOCKS, ETC., REPORTED BY FERTILIZER MANUFACTURERS

DECEMBER, 1935

COMPARED WITH PRECEDING MONTHS



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Concentrated Superphosphates

One of the chief developments in the move toward concentrated fertilizers has been the development of so-called double and treble superphosphates which are products containing less gypsum per ton and which contain from 2½ to 3 times as much available phosphoric acid (*) as does ordinary superphosphate.

T.V.A. FERTILIZER ACTIVITIES

While the processes of manufacturing the more highly concentrated superphosphates have been known for a number of years, little headway has been made in actually getting them into use by farmers.

The matter has taken on new significance by the activities of the T.V.A. The T.V.A. has not only put into operation entirely modern plants for the production of treble superphosphates but has also made arrangements for practical demonstration of their use under real farm conditions, on a series of cooperating farms in the counties embraced in the T.V.A. project. Thus the T.V.A. is attacking the problems which have retarded the spread in the use of concentrated superphosphates, namely, the question of educating the farmer both as to the efficiency and methods of applying the more concentrated fertilizers.

The fertilizer manufactured by T.V.A. has not been sold but has been given f.o.b. the factory to these cooperating farms to be used in developing proper methods of use. The commercial manufacturers of fertilizer welcome such experimentation but are opposed to any sale of fertilizer by the T.V.A. in competition with private manufacturers.

Potential Re-location of Superphosphate Plants

If measurably successful, this movement toward increasing the use of more highly concentrated superphosphates will bring decided readjustments not only to methods of manufacturing superphosphates but also in the geographic location of the plants. Plants manufacturing double and treble superphosphates will in all probability be located near the phosphate rock mines rather than near the fertilizer consuming areas. This change will be economically desirable because a treble superphosphate plant ships in about 1-1/3 tons of raw material for every 3/3 ton of finished product, whereas the ordinary superphosphate plant ships in 1-1/3 short tons of material and ships out 2 tons of finished product. Under such conditions existing superphosphate plants unless located in ports with cheap water rates, will be distinctly limited as to their potential market.

(*) "Crude Phosphates and Superphosphate," U. S. Tariff Commission Report No. 100, submitted in response to Senate Resolution 293, 72nd Congress, 1934, p. 10.

Potential Competition for World Markets

In addition to changing the location of the superphosphate industry the development of these double and treble superphosphates should tend to give the United States an opportunity to compete in World markets with these products. At the present time, although we export approximately one-third of our production of phosphate rock, our exports of superphosphate are negligible.

Potential Increased Use in the Middle West

One of the limiting factors in extending the use of fertilizers in the Mid-West grain area has been its cost to the farmer--a large share of which has been the transportation costs. In this region the chief fertilizers used are either superphosphate, for direct application of mixtures with relatively high phosphoric acid content. As pointed out in the chapter on Distribution and Prices, the more highly concentrated fertilizers cost the farmer less per unit of plant-food content. It thus appears reasonable to expect that the development of more highly concentrated superphosphates, and of proper methods of farm use will mean that the cost per unit of phosphoric acid at the farm will be so reduced, that more grain farmers will find them economical to use. The significance of these reduced costs in connection with the proposed retirement of considerable acreage from grain production in order to build up soil fertility is at once apparent.

The Economies in the Manufacture of Concentrated Fertilizers

The following quotation gives an excellent idea of the savings of a fertilizer manufacturer in the handling, bagging and transportation costs of these concentrated fertilizers as contrasted to ordinary low analysis mixtures. In the long run any such savings should result in lower prices to the farmers.

> "As an example let us contrast 3-9-3 with 9-27-9, considering only the differences in cost of P_2O_5, bagging and freight. The P_2O_5 in 3-9-3 can be obtained from 17 per cent superphosphate, at, let us say, 65 cents a unit, whereas that in the 9-27-9 will cost, say, 85 cents. The difference for 27 units at 20 cents per unit is $5.40. The cost of bagging three tons at $3.00 and of freight at $3.50 amounts to $19.50 for 3-9-3 and to $6.50 for 9-27-9, a difference of $13.00, or, deducting the $5.40 expended for the concentrated superphosphate, a saving of $7.60 on the higher analysis." (*)

(*) "High-Analysis Superphosphates," by E. L. Larison, Superintendent, Phosphate Plant, Anaconda Copper Mining Company, Anaconda, Montana, Proceedings of the Fifth Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1929, p. 78.

Potential Manufacturing Economies

The further development in the use of these concentrated fertilizers will, in the long run solve another of the distressing problems now confronting fertilizer manufacturers and will result in large savings to the farmer. As higher concentrations of fertilizer are used the number of analyses sold are very much reduced. The elimination of many analyses will reduce the operating cost of most fertilizer plants.

The following quotation is illustrative of this point:

> "Anyone can prove the results of numerous changes in brand during the shipping season. I recently examined some figures showing individual days' runs. One mill working on one analysis shipped as much fertilizer as two mills making the ordinary run of analyses. This, you will note, would cut the labor shipping cost in half and would save power and repairs. And multiplicity of analyses continues to affect the cost of your business still further--you must have more factory supervision, more clerks in the factory and office to keep a record of the various analyses made and sold. Here is a condition that is entirely within the control of the members of the fertilizer industry, and I believe that the time has arrived for us to concentrate more on this opportunity to eliminate waste. If all manufacturers will do it, it will be easy; if only a few try to do it, it will be hard, because the number of analyses sold can be made intensely competitive." (*)

Phosphate Rock and Superphosphate

Sources of Phosphorus in Fertilizers

While phosphorus is obtained from bones and also from basic slag (a by-product in the production of steel), the main source of phosphorus for fertilizers is phosphate rock and other phosphate material, such as apatite; this differs from phosphate rock principally in physical form. The phosphorus contained in phosphate rock and apatite is not readily available for assimilation by plants and most of it is chemically treated with sulphuric acid to make it more readily soluble for plant assimilation.

Table 18 shows the estimated consumption in the United States and its possessions of crude phosphates over an extended period of time and shows that approximately 90 per cent of the total domestic consumption of crude phosphates is used for the production of superphosphates.

(*) "Change and Cooperation," by L. W. Rowell, Vice-President, Swift & Company and President of The National Fertilizer Association, Proceedings of the Sixth Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1929-30, p. 11.

Sources of Crude Phosphates

The United States is independent of foreign countries with regard to its supply of crude phosphates. Imports since 1929, have equalled about $\frac{1}{2}$ of 1 per cent of domestic production. Exports amount to approximately 38 per cent of the domestic production.

At the present rate of production, (2,000,000 to 3,000,000 tons of phosphate rock annually) the United States reserves of these materials will last for an indefinite period. The Westers sources of supply are low grade but they represent a potential source if the other high grade deposits ever approach exhaustion. Table 19 shows the estimated reserves of phosphate rock in the United States as of December 31, 1930.

TABLE 18

PHOSPHATES, CRUDE: ESTIMATED CONSUMPTION BY PRINCIPAL USES IN THE UNITED STATES AND ITS POSSESSIONS (*)

(Long tons)

Year	Total consumed in United States and possessions	Consumed in manufacture of superphosphate	Consumed in manufacture of chemicals etc.	Consumed in direct application to soil
1870	54,109	53,369	540	200
1880	168,702	166,102	2,500	100
1890	323,191	314,991	6,500	1,700
1900	1,008,307	970,107	30,200	8,000
1910	1,593,657	1,493,957	79,700	20,000
1920	3,034,333	2,779,432	182,100	72,801
1921	1,334,248	1,227,345	93,400	13,503
1922	1,704,479	1,537,583	150,867	16,029
1923	2,185,880	1,932,110	243,222	10,548
1924	2,065,114	1,903,319	147,475	14,320
1925	2,614,354	2,419,994	162,361	31,999
1926	2,478,391	2,268,275	180,214	29,902
1927	2,280,683	1,998,044	249,682	32,957
1928	2,648,454	2,380,791	225,518	42,145
1929	2,663,008	2,262,239	339,545	61,224
1930	2,733,328	2,367,787	323,948	41,593
1931*	1,597,150	1,383,550	189,300	24,300

* No later data are available.

(*) Mineral Resources of the United States, U. S. Bureau of Mines.

TABLE 19

PHOSPHATES, CRUDE: ESTIMATED RESERVES IN THE UNITED STATES AS OF DECEMBER 31, 1930, ON THE BASIS OF A CONTENT OF 55 PER CENT OR MORE OF TRICALCIUM PHOSPHATE (*)

Source	Estimated reserves (long tons)	Source	Estimated reserves (long tons)
Florida	377,000,000	Western States--continued	
South Carolina	9,000,000	Utah	327,000,000
Tennessee	93,000,000	Wyoming	115,000,000
Western States:		Arkansas	20,000,000
Idaho	4,997,000,000	Kentucky	1,000,000
Montana	391,000,000	Total	6,231,000,000

CRUDE PHOSPHATES CONTROLLED BY FERTILIZER MANUFACTURERS

No recent studies have been made of the extent to which fertilizer manufacturers own the sources of crude phosphates, but the principal producers of these materials are generally alleged to be the larger fertilizer manufacturers. This is the only one of the principal fertilizer raw materials in which the fertilizer manufacturers have a controlling interest (**).

Phosphate Rock Production

In 1934, 80 per cent of the value of the domestic output of phospate rock was furnished by Florida. The Brown phosphate fields of Tennessee accounted for about 18.3 per cent and the Montana-Idaho fields for about 1.5 per cent (***). The first two fields by reason of the uniformity of grade of product, favorable geographic location or relatively low cost of production have easily maintained the lead in the country's production. Because of the extent and regularity of its occurrence in Florida, pebble phospate has been cheaper and it reaches a wider market than the Tennessee phospate. The latter, however, has the advantage of a good location, particularly with respect to the rapidly growing fertilizer-consuming regions in the Middle West.

(*) "Crude Phosphates and Superphospate", Report No. 100, United States Tariff Commission, 1935, table 3, p. 5.

(**) It is here recognized that the large packing companies have plants producing fertilizer and that they control a large source of organic nitrogen carriers but they are engaged in manufacturing fertilizer as a business and only use the organic nitrogen carriers when other fertilizer manufacturers would ordinarily use them, namely, when the alternative demands for these products justify it.

(***) Exhibit 14, Appendix II, contains a detailed tabulation of the production and value of crude phosphates by areas.

The land pebble district of Florida centers in Polk County where the phosphate lies under an overburden of sand or sand clay. It occurs as rounded granules ranging in color from white to dark and in size from small grains up to pebbles of 1½ inches in diameter. In the early days, the industry worked rich deposits of high yield under generally favorable operating conditions but the problem of removing the overburden became one that rapidly increased in difficulty with the exhaustion of the shallower deposits. In the early days in Florida five cubic yards of material per ton of finished product was the limit beyond which the miner could not go and still carry on an effective campaign to enlarge his market. This limit has been gradually increased until today it is not unusual to find operators handling fifteen to twenty yards of solid material per ton of finished product. Technical methods of removing the overburden have necessitated a large increase of capital investment as have the changes necessitated by the adoption of a heavier and more efficient mining equipment (*). Another development tending to improve efficiency in the handling of crude phosphates is the development of floation as a method of concentrating the crude phosphate ores. It is estimated that about 15 per cent of the total domestic output of phosphates in 1934 was concentrated by the flotation process (**)

Price Quotations for Phosphate Rock

The following tabulation on prices covers quarterly quotations on Florida land pebble from 1923 to 1935 as given in a trade journal. They are not to be interpreted as necessarily realization prices, but they do give an indication of the high degree of stability and the price of the chief crude phosphate sources over a period of years. No study has as yet been made and this is the reason for this price inelasticity but it is highly significant that some five or six large firms control the bulk of phosphate rock and pebble production in the United States. According to the United States Tariff Commission about a dozen of the large fertilizer manufacturers are large producers of phosphate rock (***).

(*) A good discussion of phosphate production is contained in "Phosphate Production Technology", by John T. Burrows, Vice President, International Agricultural Corporation, New York, Proceedings of Fifth Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1929, p. 43.

(**) "Crude Phosphates and Superphosphate", United States Tariff Commission, Report 100, 1935, p. 6.

(***) "Crude Phosphate and Superphosphates", U. S. Tariff Commission, Report No. 100, 1935, p. 11.

TABLE 20

PHOSPHATES, CRUDE: PRICE QUOTATIONS FLORIDA PEBBLE - 68 PER CENT F.O.B. MINES (*)
(Dollars per short ton)

Year	January	April	July	October
1924	3.25	2.25	2.25	2.15
1925	2.10	2.10	2.58	2.65
1926	2.98	3.21	3.20	3.20
1927	3.18	3.08	3.08	3.08
1928	3.08	3.08	3.08	3.18
1929	3.18	3.18	3.18	3.18
1930	3.18	3.18	3.18	3.18
1931	3.18	3.18	3.18	3.18
1932	3.18	3.18	3.18	3.18
1933	3.18	3.18	3.18	3.18
1934	3.03	3.03	3.25	3.25
1935	3.40	3.40	3.40	3.40

Exports of Crude Phosphates

The extent and value of the exports of crude phosphates from the United States is indicated in the following tabulation:

TABLE 21

PHOSPHATES, CRUDE: EXPORTS,[1] ALL GRADES (**)

Year	Quantity Long Tons	Value	Year	Quantity Long Tons	Value
1900	619,995	$5,217,560	1927	918,211	$4,731,562
1910	1,083,037	8,234,276	1928	898,764	4,453,101
1920	1,069,712	10,570,175	1929	1,142,746	5,386,919
1921	733,312	7,320,137	1930	1,225,722	5,630,547
1922	719,294	5,858,167	1931	951,305	4,277,070
1923	827,551	5,772,171	1932	613,035	2,795,854
1924	818,773	5,120,832	1933	829,059	3,544,377
1925	870,200	5,677,763	1934[2]	993,493	5,008,532
1926	748,963				

[1] Exports consist of varying amounts of rock of different tricalcium phosphate content. To show unit values of the aggregate would be misleading.

[2] Preliminary.

(*) Source - Oil, Paint and Drug Reporter. For complete prices series by months, 1904 to date, see the Fertilizer Industry NRA Archives Exhibit A, Tables IX J and K, pp. 27-30.

(**) "Crude Phosphate and Superphosphates", U. S. Tariff Commission, Report No. 100, 1935, Table 7, p. 9.

SUPERPHOSPHATE

Manufacture of Superphosphate

The following description gives an idea of the manufacture of superphosphate and mixed fertilizer in a typical plant: The phosphate rock is received at the fertilizer plant in carload lots and by various mechanical methods is transferred to a grinder where these rocks are broken up into small particles. When the rocks are ground they are carried to an air separator which blows that portion which has been ground fine enough into an elevator for conveyance to a storage bin at the top of the plant. The rock which needs further grinding is returned to the grinder.

Sulphuric acid is brought into the plant in carload lots and stored in tanks away from the plant. When the acid is needed it is pumped to an open tank in the top of the fertilizer mill where it is diluted with the proper amount of water.

The ground phosphate rock and sulphuric acid are then put into a mixer in about equal proportions by weight. This mixer is a large covered vat in which paddles revolve and thoroughly mix the acid and phosphate until it becomes a gummy mass. The gas generated is drawn off and absorbed and when the chemical reaction between the sulphuric acid and the phosphate has proceeded to a satisfactory point the mixer operator discharges the material to a storage bin beneath the machine before another charge is let into the mixer.

This process generates considerable heat and the walls of the storage bin are usually thick concrete. Normally the mixture is allowed to set over night.

The engineering and mechanical problems concerned with the manufacture of superphosphate have received much attention. Mass production involving the handling of large quantities of solid materials with the least manual labor have motivated the installation of various mechanical devices for discharging the superphosphate from the dens. Some superphosphate plants discharge the dens by means of electric and gasoline shovels; others utilize overhead traveling cranes and others have so-called mechanical dens and excavators.

Mechanical den assistants offer the advantage of practically continuous operation with a minimum amount of attention and manual labor and are economical of space which is an important item in many fertilizer plants. Although there is considerable room for improvement in the mechanical equipment many older superphosphate plants and many of the newer plants are carefully designed and equipped with efficient labor saving machinery.

In order to insure a satisfactory mechanical condition and a maximum conversion to available phosphoric acid, superphosphate should remain on the aging pile for at least a month but its storage requires a large space and the time consumed is of importance in [illegible] plants. These aging piles are usually on the bare ground underneath a shed. Other fertilizer materials are similarly stored.

The production of superphosphate in the United States is indicated in the following tabulation:

TABLE 22

SUPERPHOSPHATE: PRODUCTION IN THE UNITED STATES (*)
(Short Tons)

Year	Quantity	Year	Quantity
1921	3,483,704	1930	4,595,096
1923	4,237,537	1931	2,744,528
1925	4,096,442	1932	1,765,971
1927	4,086,225	1933	2,694,870
1928	4,954,240	1934	2,868,016
1929	4,815,663		

Chart IX gives a graphic presentation of the statistics relating to production, receipts, shipments and stocks of superphosphates as reported to the Bureau of the Census by manufacturers producing more than 95 per cent of the total value of superphosphates reported at the Census of Manufactures for 1933 (**).

Companies Manufacturing Superphosphate

There were 196 plants in the United States manufacturing superphosphate in 1934, of which 100 produced their own sulphuric acid (***), the balance purchasing acid. The balance of the plants engaged in mixing fertilizer in the United States purchase their superphosphate from these manufacturers and the purchases of superphosphate by the dry mixers who do not mix it themselves represent about 60 per cent (****) of the annual production of this fertilizer material.

(*) Adapted from "Crude Phosphates and Superphosphate", U. S. Tariff Commission Report No. 100, Second Series, 1935, Table 11, p. 11. Based on data as reported by the Bureau of the Census which prior to 1928 are for all grades of superphosphate while those for 1928 and later years are on a 16 per cent basis.

(**) The statistics from which Chart IX was prepared are contained in Exhibit 15 of Appendix II.

(***) Compilation made by the Fertilizer Industry Study from plant listings in The American Fertilizer Handbook--1935, Ware Brothers, Philadelphia, Pennsylvania, pp. A3-A58, and checked with lists of producers who filed prices under provisions of the Code for the Fertilizer Industry. This tabulation is included in the Appendix II and is marked Exhibit I.

(****) "Crude Phosphates and Superphosphate", U. S. Tariff Commission, Report No. 100, 1935, p. 11.

CHART IX

DEPARTMENT OF COMMERCE

BUREAU OF THE CENSUS

WASHINGTON

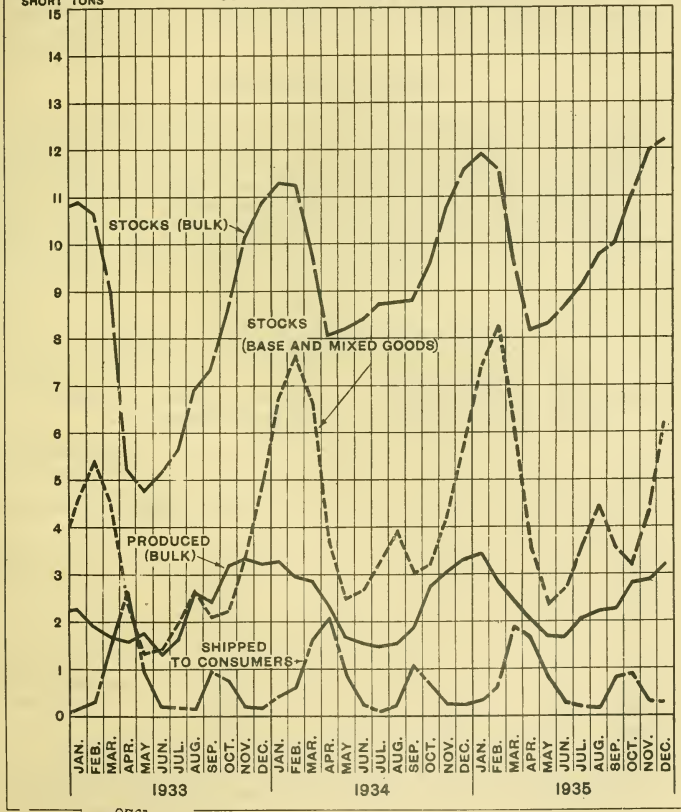
FOR RELEASE ON RECEIPT

SUPERPHOSPHATES

PRODUCTION, ETC., REPORTED BY FERTILIZER MANUFACTURERS

DECEMBER, 1935

COMPARED WITH PRECEDING MONTHS



Profit Margin in Superphosphate

It is a frequent claim of manufacturers of superphosphate that the product is consistently sold at an unsatisfactory margin of profit and, at times, below the cost of production. That these claims are sincerely made by industry leaders is indicated by the fact that the "inadequate" prices obtained for superphosphate are often cited at Industry conventions as a major industry problem.

To arrive at a definite conclusion regarding these claims, it would be necessary to have access to definite cost figures of a reasonable cross section of the various types of plants producing superphosphate, a privilege not possible to those who have conducted this study. There are, however, a number of salient facts having bearing on the situation which are worthy of discussion.

Concentration of Control

As indicated in Table 23, six of the largest companies in the Industry own approximately half of the total number of the plants producing superphosphate. These companies are the principal producers of phosphate rock, and they also manufacture sulphuric acid in 49 of the 91 plants which they own and operate. As practically all of the superphosphate produced in this country is manufactured by fertilizer manufacturers, and practically none of the product is imported, it is obvious that there is no competition from outside of the Industry.

TABLE 23

PLANTS OF SIX OF THE LARGER COMPANIES (*)
1933

Name of Company	Number of Plants Manufacturing Acid	Superphosphate Plants Not Manufacturing Acid	Dry Mixing Plants	Total
American Agricultural Chemical Co.	12	4	9	25
Armour Fertilizer Works	12	1	8	21
International Agricultural Corp.		18	4	22
Royster Guano Co.	4	5	5	14
Swift & Co. Fertilizer Works	2	6	17	25
Virginia-Carolina Chemical Co.	19	8	8	35
	49	42	51	142

(*) Table compiled by the Fertilizer Industry Study from plant listings in The American Fertilizer Handbook-1933 edition, Ware Brothers, Philadelphia, Pennsylvania.

These companies operate in all fertilizer consuming areas east of the Mississippi River. They are the dominant factors in both production and distribution, and it is generally known that the resale prices for superphosphate established by these companies are the prices in effect in the various districts or zones.

Being producers of the raw materials, these large companies have cost advantages over smaller competitors who must purchase phosphate rock and sulphuric acid in the open market. Other factors being equal, the larger companies selling superphosphate at prices which they had themselves established, would derive a greater net profit from such sales than would their smaller competitors.

Competitive Position of Independent Operators

The smaller independent operator who purchases phosphate rock and sulphuric acid has a smaller proportionate investment in equipment and in some years sulphuric acid can be bought in the open market at a price below the cost of production of some of the older acid plants owned by fertilizer manufacturers. Through the advantage of direct and, in most cases, personal supervision over production activities, these producers may also be able to effect operating economies which the large producers with less efficient superintendence do not attain.

A comparison of financial statements of smaller independent companies with those of their larger competitors over a period of years as contained in Table 5 shows a more consistently profitable business for the independent companies. This fact is in corroboration of the opinion gained through the examination of a great deal of available data that the difficulties of the larger companies in deriving a profit from sales of superphosphate as well as mixed fertilizer is due in a large measure to the liabilities they have assumed in spreading plants in unnecessary profusion throughout each consuming area.

Imports

Imports of superphosphate are relatively insignificant in comparison with domestic production and amounted to only 1.4 per cent, 0.99 per cent and 0.34 per cent in 1932, 1933, 1934, respectively of said domestic production. The following tabulation shows the imports for each of these three years:

TABLE 24

SUPERPHOSPHATE IMPORTS (*)
(Short tons)

1932		1933		1934*	
Quantity	Value	Quantity	Value	Quantity	Value
24,507	315,844	26,549	313,317	18,265	245,540

* Preliminary

(*) Census Bureau

Exports

The exports of superphosphate consist mainly of standard superphosphate although some of the higher grades are shipped. Most of these exports go to Canada and to Cuba and the following tabulation is indicative of the tonnage and value of these superphosphate exports:

TABLE 25

SUPERPHOSPHATE: UNITED STATES EXPORTS (*)

Year	Quantity Short tons	Value
1922	29,995	$372,297
1923	47,151	534,446
1924	51,241	583,620
1925	73,672	988,914
1926	72,186	937,278
1927	120,408	1,615,466
1928	99,247	1,510,557
1929	95,332	1,489,476
1930	125,058	1,595,450
1931	91,377	940,688
1932	26,749	258,896
1933	39,616	333,966
1934[1]	68,248	606,142

[1] Preliminary

(*) "Crude Phosphates and Superphosphate", U. S. Tariff Commission Report No. 100, 1935

Price Quotations

Price quotations for standard superphosphate which is quoted on a 16 per cent P_2O_5 basis, run of pile, bulk basis f.o.b. Baltimore in dollars per short ton is shown in the following tabulation:

TABLE 26

SUPERPHOSPHATE: PRICE QUOTATIONS, F.O.B. BALTIMORE(*)

Month	1928	1929	1930	1931	1932	1933	1934
January	$8.50	$10.00	$9.50	$8.00	$7.50	$6.50	$7.50
April	8.50	10.00	8.50	8.00	7.50	6.00	7.50
July	9.60	9.50	8.50	8.00	7.50	7.00	8.00
October	10.00	9.50	8.50	7.50	7.00	7.50	8.00

(*) "Crude Phosphates and Superphosphate", U. S. Tariff Commission, Report No. 100, 1935, Table 17, p. 15.

Prices of Phosphoric Acid in Superphosphate

The following table is based on trade journal market quotations of superphosphate, f.o.b. Baltimore for 16 per cent phosphoric acid. The tabular data are presented in terms of cents per unit of phosphoric acid which were arrived at by dividing the per ton quotation by 16. Four monthly quotations are given for each of the years from 1924 to 1935, inclusive, and a complete series by months 1900-1935, is given in Appendix II, Exhibit 2.

TABLE 27

SUPERPHOSPHATE PRICES: F.O.B. BALTIMORE FOR 16 PER CENT PHOSPHORIC ACID

Year	January	April	July	October	Year	January	April	July	October
1924	50.8	48.4	46.7	50.4	1930	59.4	54.7	53.1	53.1
1925	56.2	56.2	60.0	60.0	1931	50.0	50.0	47.7	46.9
1926	62.5	65.0	60.0	54.8	1932	46.9	43.9	46.9	44.9
1927	53.1	54.7	53.1	53.1	1933	39.1	39.1	44.1	43.8
1928	53.1	53.1	60.0	62.5	1934	46.9	46.9	50.0	50.0
1929	62.5	62.5	62.5	59.4	1935	50.0	50.0	48.4	48.4

Farm Income a Leading Price Factor

As perhaps would be expected, the low point of prices was reached in 1933. This no doubt was a reflection not only of the generally depressed condition of industry but especially of the sharp drop in fertilizer sales in 1932. As already noted above there was some expansion of fertilizer sales in 1933 in spite of the continued drop in farm income. A reflection of this may perhaps be seen in the upturn of prices in superphosphate in the Fall of 1933.

In like manner, the upturn in prices in 1925 and 1926 would seem to be at least in part due to increased demand for fertilizer as reflected in the tonnage figures of those two years which showed considerable increase as compared to 1924. In other words it would appear that in these years improved agricultural income not only made it possible to sell more fertilizers but also to increase the price of this basic material.

Demand Versus Cost as Price Determinant

Certainly it would not seem that the increased price of phosphoric acid during these years could be attributed to any change in the price of phosphate pebble which remained practically constant. The same holds true for the price of sulphuric acid, the other chief ingredient in making superphosphate. The market quotations on 66° Baume sulphuric acid have remained almost constantly at $15.50 per short ton since June, 1926 (*).

(*) Table IX-L, Fertilizer Industry, FRA Archives, Exhibit A, pp. 27-30.

In January, 1934 prices of superphosphate represented an increase of 7.8 cents per unit of phosphoric acid or 20 per cent of that of January, 1933. In January of 1935 the price stood at 50 cents per unit as contrasted with 39.1 cents in January, 1933. There is no way of definitely determining how much of this increase, if any, was due to the operation of the Code and what part, if any, was due to the upswing in business.

Summary on Prices of Materials

As noted under the detailed discussion of the prices of individual materials, the trend of prices of organic nitrogen carriers and of potash carriers over a period of years has been decidedly downward. The other principal fertilizer material--superphosphate (the only one made by fertilizer manufacturers) has not shown a similar trend. Certain organic nitrogen carriers (tankage, and cottonseed meal) have fluctuated rather sharply from time to time coincident with the quantity of supplies available and with the demand for them for alternate uses, chiefly in feed stuffs. However, as shown in Chart V, organic materials are now relatively unimportant as sources of nitrogen in the manufacture of fertilizer (*).

Price Trends 1926 to 1935

The following tabulation shows how the prices of a group of materials have varied during the past ten years. The index numbers were calculated by using wholesale prices compiled and published by the Bureau of Labor Statistics. The prices of 1929 are taken as 100 per cent in constructing the index of prices.

TABLE 28

INDEX OF WHOLESALE PRICES OF FERTILIZER MATERIALS (1929-100) a/ (*)

	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
Jan.	111.7	107.6	102.9	102.7	97.5	88.4	75.9	67.6	74.3	72.2
Feb.	112.9	108.1	102.1	102.8	97.2	88.0	75.8	66.8	75.1	71.9
Mar.	114.0	108.7	104.8	102.8	95.8	87.7	74.5	67.2	75.5	72.0
Apr.	112.5	107.8	105.7	102.7	95.6	87.5	73.1	68.3	74.6	71.7
May	110.3	106.4	103.7	102.2	93.9	87.4	75.4	74.7	72.1	71.6
June	107.9	106.7	102.1	100.5	92.6	86.6	73.8	73.8	73.7	71.3
July	105.8	101.8	101.0	98.5	91.5	85.4	72.5	74.5	73.4	71.3
Aug.	103.0	99.0	101.4	98.3	90.4	80.8	72.1	74.9	70.4	72.5
Sept.	105.3	100.0	101.5	97.6	90.2	80.6	69.0	72.3	72.1	73.0
Oct.	104.0	102.2	101.8	97.8	90.8	76.2	68.8	73.4	71.3	73.0
Nov.	103.4	103.0	102.2	97.6	89.1	76.1	68.9	73.6	70.1	
Dec.	107.8	103.1	102.2	97.2	88.4	76.1	68.5	73.9	70.9	
Average	108.6	104.5	102.6	100.0	92.3	83.4	73.6	71.8	72.8	

(*) Bureau of Labor Statistics indexes of wholesale prices of "Fertilizer Materials" shifted to 1929 Base.

(*) Prices of individual fertilizer materials over a period of years is set forth in Tables IX-A-Q, Exhibit A, Fertilizer Industry, NRA Archives, pp. 15-34.

The table shows that in 1926 and 1927 the prices of materials were considerably higher than even in 1929 and 1930 which were two of the best years from the standpoint of sales of fertilizer to farmers. On the other hand, prices of materials moved downward in 1931 and 1932, and remained at this lower level until the summer of 1933. In October 1935, the last month for which data are available, the index stood at 73 as compared to 97.8 in October 1929, and 68.8 in October of 1932. The degree to which the price upturn in the latter part of 1933 was influenced by generally better economic conditions and/or the code, is impossible to determine with the available data. Neither is it possible to show how much of the price increase was due to increase in one of the nitrogen carriers (ammonium sulphate) and how much to the price of superphosphate which is made by the fertilizer manufacturers. As previously noted, the price of superphosphate increased although the prices of its two chief ingredients, i.e., Florida land pebble and sulphuric acid did not fluctuate materially (*).

PROCESS OF MIXING RAW MATERIALS TO MAKE MIXED FERTILIZER

In the larger plants mechanical methods are utilized to transport smaller quantities of the various fertilizer materials into different storage bins above the mixer which is practically on the flood level and when ready to make a particular type of fertilizer the mixer operator releases the proper amount of each material into the mixer. When thoroughly mixed the finished fertilizer is poured into sacks hung underneath the mixer by means of a lever operated by hand.

The sacks are then sewn either by hand or by machine and are moved by means of hand or electric trucks either to the freight cars or storage warehouses.

A preliminary mixing of base goods often takes place about four months before the shipping season. The preparation of most finished mixtures does not take place except just prior to its shipment so that very little bagged fertilizer is kept in stock.

(*) In considering these price data and price trends of materials, it must be borne in mind that they are based on market quotations for materials and do not necessarily indicate the actual prices paid by fertilizer manufacturers.

CHAPTER III

LABOR

DEMAND FOR LABOR

Number of Employees

The statistics detailed in Table 29 indicate that for the period from 1919 to 1933, the annual average number of employees fluctuated from a maximum of 26,296 in 1919 to a low of 14,551 in 1931. The maximum employment in any one month as indicated by this table is for the month of March 1919 which showed a peak employment of 38,357 wage earners; whereas the lowest minimum number of wage earners reported in any Census year occurred in the month of July in 1933 when only 8,209 wage earners were employed.

Seasonal Variation in Employment

TABLE 29

WAGE EARNERS IN FERTILIZER INDUSTRY - MONTHLY 1919 - 1933 (*)

	1919	1921	1923	1925	1927a/	1929	1931	1933
Annual Average	26,296	16,898	16,572	19,644	18,612	20,926	14,551	12,405
January	27,808	17,736	18,642	17,761		19,946	13,840	10,277
February	31,043	19,913	24,958	23,212		23,337	17,250	11,852
March	38,357b/	26,745b/	30,707b/	33,402b/		35,195	23,118	15,637
April	36,465	24,591	25,141	31,962		37,767b/	27,379b/	25,016
May	23,856	13,475	16,970	16,338		18,688	14,867	12,581
June	21,071c/	12,670	13,610c/	13,916c/		14,847	9,821c/	8,374
July	21,731	12,346c/	13,818	14,116		14,554c/	10,812	8,209
August	22,500	13,887	15,181	15,321		15,287	11,187	8,972
September	25,205	16,542	17,280	18,872		18,961	12,667	11,430
October	22,028	14,876	15,904	17,405		17,941	11,913	11,948
November	21,897	15,470	15,508	16,655		17,381	10,729	11,892
December	23,591	14,523	15,142	16,773		17,210	11,025	12,674
Per Cent Minimum is of Maximum	54.9	46.2	44.3	41.7		38.5	35.9	32.8

From Census of Manufactures, Bureau of Census

a/ Monthly figures for 1927 not compiled. b/ Months of maximum employment. c/ Months of minimum employment.

(*) Classification of Fertilizer Employees by the Census - The Census of Manufactures in collecting statistics of wage earners classifies a particular plant by the greatest dollar volume of its products. Included in Census fertilizer statistics of employment are those employees of fertilizer plants which manufacture additional products other than fertilizers where fertilizer represented the most important product in dollar value. On the other hand, the Census figures would not include employees engaged in manufacturing fertilizer in those plants where fertilizer represented a minor portion of the

dollar volume of that particular plant. As compared with the Code, therefore, we must keep in mind that the figures for wage earners in the Census include figures of workers employed in manufacturing sulphuric acid even though the production of sulphuric acid did not come under the Code for the Fertilizer Industry.

Limitation of the Census Figures - The questionnaire circularized by the Census of Manufactures requests that the employer report wage earners employed by months giving the number on the payroll for a week which includes the 15th day of the month if this was a normal week and if not, to give the figures for a normal week. It should be recognized in considering these figures that if a worker were employed part time and were on the payroll during this week, even though he were not employed for the balance of the month, that the use of the Census figures would have to be qualified to this extent. This limits the significance of any average figures which utilize the number of employees as reported by the Census since this number of employees is normally greater than the number of wage earners which would be required to produce the amount of products manufactured. In the Fertilizer Industry NRA Archives we have included as Exhibit B a sample of the questionnaires used by the Census of Manufactures in 1933 and 1935 in securing reports from fertilizer plants.

Table 29 shows that the seasonal variation in this Industry has been increasing in each year since 1919 when the minimum number of wage earners in any month was 54.9 per cent of the number in the maximum month of employment of that year. This percentage of minimum to maximum employment has steadily decreased to 1933 when it was 32.8 per cent.

Reasons for Increased Seasonality

The increased seasonality of employement is due to a combination of many factors. Improved roads and the use of the automobile together with keen competition within the industry have changed the farmer's buying habits. Orders are not placed until the material is needed and is rarely purchased and stored in anticipation of demand. the development of mechanical devices and the need for less hand labor in the off season are contributing factors.

Pattern of Monthly Employment

For the seven Census periods shown in Table 30, we have calculated the average number of workers employed in each month and have figured the percentage which each month's employment is to the average employment for the entire year. The results are included in the following tabulation.

TABLE 30

RELATIVE EMPLOYMENT BY MONTHS (*)

	Average Employment 1919, 1921, 1923, 1925, 1929, 1931, 1933.	Monthly Percentage of Annual Average
January	18,001	8.1
February	21,652	9.8
March	29,023	13.1
April	29,760	13.4
May	16,682	7.5
June	13,473	5.9
July	13,655	6.1
August	14,619	6.6
September	17,279	7.8
October	16,002	7.2
November	15,647	7.1
December	15,849	7.1

(*) Table derived from Bureau of Census figures contained in Table 29-Supra.

Type of Labor Required

A survey of labor statistics made by the National Fertilizer Association in connection with their application for a code showed that 66.1 per cent of the total number of man-hours worked in the Spring of 1933 by employees in the fertilizer industry including sulphuric acid and superphosphate plants was accounted for by so-called common labor in dry mixing plants including loading and shipping employees. If we include the ordinary labor in superphosphate and sulphuric acid plants to that in the dry mixing department, the total represents 67.6 per cent of all man-hours worked for the comparative period.(*)

In 1930, of the 18,243 males classified by the Census (**) as "laborers" in the fertilizer factories, 15,268 or 83 per cent were negroes. These male "laborers" (18,243) constituted 66 per cent of all males reputed as working in fertilizer factories. Most of the jobs

(*) Factual statements by members of the fertilizer industry before the National Recovery Administration - Code Record Section, Vol. B, Part 3, p. 23. (Copy in N.R.A. Fertilizer Industry Files)

(**) Fifteenth Census of the United States, 1930, Population Vol. 5, General Report on Occupation, Table 3, p. 430. A detailed tabulation of persons gainfully employed in fertilizer factories by occupations in 1930 is included as Exhibit 16, in Appendix II.

require no particular skill and the nature of the work is such that the employee is constantly exposed to dust and dirt. While a skeleton organization of approximately one-half of the number of employees employed at the time of peak production is kept throughout the year, much of the labor in the industry is employed on a part time basis, although the supposition is that the same workers find employment year after year even though on a part time basis in the same plant.

Training Period Required.

At the time of the presentation of the code it was estimated that 80 per cent of the labor employed by the industry required one week's training; 5 per cent of the employees required one month's training; 5 per cent, three months; 5 per cent, six months; and 5 per cent, more than six months (*).

It should be pointed out here, however, good business management would probably make it desirable to keep these workers requiring the longer period of training on the payroll for the entire year while those requiring shorter period of training would be employed on part time basis.

Relative Importance of Different Departments

Some indication of the relative importance of the various departments of complete fertilizer plants is indicated by the following tabulation which shows the percentage of the total number of man-hours worked in each department of the 363 plants who answered the questionnaire of The National Fertilizer Association for statistics on their operation in the Spring and Fal seasons of 1933 and 1932 respectively as well as for the fiscal year ended June 30, 1933.

(*) Letter to General Hugh Johnson, Administrator, NRA, from Charles J. Brand, Executive Secretary, The National Fertilizer Association, dated April 4, 1934. (In NRA Fertilizer Industry Files)

TABLE 31

PERCENTAGE OF ACTIVITY IN EACH DEPARTMENT BASED ON MAN-HOURS WORKED BY EMPLOYEES - YEAR ENDED JUNE 30, 1933 (*)

Department	Fiscal Year Ended June 30, 1933 Percentage	Spring Season 1933 Percentage	Fall Season 1932 Percentage
Sulphuric Acid	4.4	3.0	7.3
Superphosphate	5.4	4.0	8.6
Dry Mixed Fertilizer	76.6	82.6	63.1
Watchmen	6.0	4.4	9.8
Mechanics	7.6	6.0	11.2
TOTAL	100.0	100.0	100.0

(*) Factual statements by members of the Fertilizer Industry before the National Recovery Administration on the Code of Fair Competition for the Fertilizer Industry, opposite p. 22, entitled Payroll Analysis--Code Record Section, Part III, Vol. B, (In NRA Fertilizer Files)

These percentages would not necessarily hold true for the entire industry as it is probably that the reporting plants include a good many of the larger plants which have sulphuric acid and superphosphate departments.

Geographic Distribution of Labor

While Map 1 indicates the geographical location of the various fertilizer plants, this is not indicative of the number of employees in particular states.

Table 32 shows for each state the average number of employees and the wages paid by fertilizer plants reporting to the Bureau of Census. It also shows the percentage which wage earners in and wages paid by these plants in each of the states represented of the United States totals. The 1929 data covered 638 plants and those for 1933 are for 522 plants. For some states the data cannot be shown since to do so might result in disclosure of figures for individual businesses, but the data for each state, 12 in 1929 and 7 in 1933, are included in the United States totals.

Significant relationships are seen in comparing some of the southern states with some of those in the North and West. Thus while Alabama in 1933 had 5.2 per cent of the total number of wage earners, the wages paid were but 3 per cent of the United States total and in Georgia the figures were 11.7 per cent and 7.8 per cent, respectively. On the other hand, New Jersey had only 3.5 per cent of the total wage earners but between 6.5 per cent of the wages, and in Ohio, the reporting plants had 4.9 per cent of the wages and paid 7.1 per cent of the wages. The 1929 data show that similar relationships existed in that year. These data of course reflect the lower wage levels in the Southern states.

Employment by Size of Business

Table 33 is self-explanatory but indicates the degree of concentration of labor in the larger plants.

TABLE 32

FERTILIZER INDUSTRY WAGE EARNERS AND WAGES - 1929 AND 1933 (*)

Number, Amount and Per Cent by States

Area	1929				1933			
	Wage Earners		Wages		Wage Earners		Wages	
	Number	Per Cent of Total	Thousands of Dollars	Per Cent of Total	Number	Per Cent of Total	Thousands of Dollars	Per Cent of Total
U. S. Total	20,926	100.0	17,884	100.0	13,063	100.0	7,374	100.0
Northern Area:								
Connecticut	171	.8	182	1.0	118	.9	85	1.2
Maine	196	.9	199	1.1	100	.8	70	1.0
Massachusetts	387	1.8	453	2.5	250	1.9	205	2.8
New Jersey	612	2.9	765	4.3	458	3.5	475	6.5
New York	236	1.1	283	1.6	192	1.5	157	2.2
Pennsylvania	570	2.7	668	3.7	422	3.2	355	4.9
Southern Area:								
Alabama	1,403	6.7	838	4.7	680	5.2	221	3.0
Arkansas	158	.8	113	.6	37	.3	16	.2
Delaware	42	.2	31	.2	63	.5	25	.3
Florida	1,084	5.2	979	5.5	937	7.2	502	6.9
Georgia	2,809	13.5	1,724	9.6	1,525	11.7	567	7.8
Louisiana	858	4.1	478	2.7	170	1.3	87	1.2
Mississippi	378	1.8	254	1.4	236	1.7	78	1.1
N. Carolina	2,140	10.2	1,551	8.7	1,354	10.4	534	7.3
S. Carolina	1,606	7.7	1,050	5.9	1,158	8.9	419	5.8
Tennessee	638	3.1	521	2.9	301	2.3	140	1.9
Texas	177	.9	152	.9	59	.5	24	.3
Virginia	2,047	9.8	1,581	8.8	1,737	13.3	765	10.5
Midwestern Area:								
Illinois	454	2.2	537	3.0	161	1.2	120	1.7
Indiana	259	1.3	273	1.5	159	1.2	96	1.3
Ohio	962	4.6	1,264	7.1	635	4.9	519	7.1
Wisconsin	--	--	--	--	42	.3	33	.5
Pacific Area:								
California	302	1.5	391	2.2	240	1.8	214	3.0
Washington	24	.1	24	.1	16	.1	13	.2
Maryland	2,855	13.6	2,819	15.8	1,619	12.4	1,198	16.4
*Other States	511	2.6	750	4.2	395	3.0	357	4.9

*Other States: Includes states for which details are not available as follows: 1929 - twelve states; 1933 - ten states.

(*) 1929 Census of Manufactures, 1929, Vol. II, pp. 686-687.
1933 Census of Manufactures, report on Chemical Industries, pp. 17-18.

Table 33

Fertilizer Plants by Size of Business (*) - 1929
Number, Value of Product and Wage Earners

Size of Business Groups	Establishments			Value of Products			Wage Earners		
	Number	Per Cent of Total		Thousands of Dollars	Per Cent of Total		Number	Per Cent of Total	
		Actual	Cumulative		Actual	Cumulative		Actual	Cumulative
$5,000 to $19,999	32	5.0	5.0	$433	0.2	0.2	127	0.6	0.6
$20,000 to $49,999	74	11.6	16.6	2,417	1.0	1.2	317	1.5	2.1
$50,000 to $99,999	120	18.8	35.4	8,713	3.7	4.9	910	4.3	6.4
$100,000 to $249,999	148	23.2	58.6	25,152	10.8	15.7	2,456	11.7	18.1
$250,000 to $499,999	110	17.3	75.9	40,120	17.3	33.0	3,440	16.4	34.5
$500,000 to $999,999	106	16.6	92.5	73,007	31.4	64.4	6,639	31.7	66.2
$1,000,000 to $2,499,999	41	6.4	98.9	59,386	25.7	90.1	4,438	21.4	87.6
$2,500,000 to $4,999,999	7	1.1	100.0	23,193	9.9	100.0	2,599	12.4	100.0
TOTAL	238	100.0		$232,511	100.0		20,926	100.0	

(*) Size of Business, i.e. Value of products - Census of Manufacturers, 1930, Vol. I, table 6, pp. 78-81
Does not include establishments with product valued at less than $5,000.

SUPPLY OF LABOR

Availability of Seasonal Labor Supply

The seasonality of the fertilizer industry presents a problem of labor supply for the periods of peak employment. Most of the extra help hired at such times are negro laborers. Even without previous experience they can be trained in not more than a week. In the mixing plants located in small towns it is alleged that these workers are workers who would normally be employed upon farms and that the fertilizer industry competes with the farms for this labor.

Surplus of Trained Employees

The peaks of employment in the fertilizer industry in recent years was 38,357 in March 1919 and 37,767 in April 1929, and that, therefore, until these peaks are again reached, there should exist a surplus of workers trained for work in fertilizer factories in the neighborhood of these plants, assuming that the industry has not migrated.

Surplus of Farm Labor

Mr. Watson raised a point at the Public Hearing (*) that to shorten the hours of labor to too great a degree in order to spread employment might seriously impair the availability of labor for use on the farm. In this connection it is interesting to examine Table 34, showing the supply of farm labor for South Atlantic States in recent years expressed as percentage of demand.

TABLE 34

FARM LABOR SUPPLY EXPRESSED AS PER CENT OF DEMAND (**)

April 1, 1935 -	117.8	April 1, 1931 -	150.4
April 1, 1934 -	134.0	April 1, 1930 -	114.4
April 1, 1933 -	182.6	April 1, 1929 -	103.1
April 1, 1932 -	173.0	April 1, 1928 -	102.9

Factors Affecting Labor Supply

The availability of farm labor over a period of years is tending to increase due to the replacement of many agricultural products by chemically produced materials which take the place of the natural products displacing farm labor and making it available for other purposes. Typical of these developments is the development of rayon as a textile, to take the place of cotton, which to the extent that it succeeds in replacing cotton as a textile, will in the long run release cotton acreage.

(*) Transcript of Public Hearing, Fertilizer Code, September 6, 1933, p. 126. (Copy in N R A Fertilizer Files)

(**) Crops and Markets published by the United States Department of Agriculture, April of each year.

Alpha-cellulose, which is the basis of the manufacture of rayon, can be obtained from wood pulp at a price not to exceed 4 cents per pound (*) after eliminating the impurities, thus placing a ceiling on the price of cotton for use as a textile, to the extent which rayon displaces it.

One of the largest releases of agricultural workers has come about through the development of the automobile and improved machinery to replace horses in farm work, thus eliminating the necessity for the growing of crops for feed to horses. Mechanical improvements on the farm also continually tend to release farm labor and these factors should be taken into consideration whenever the question is raised as to whether or not workers in the fertilizer industry jeopardize the availability of workers on the farm. Crop reduction in the last few years is also a factor which has tended to reduce the number of workers needed on the farm.

The peak demand for farm labor comes in the harvesting season rather than the planting season when the fertilizer industry needs it. Even in the South, the type of fertilizer factory or mixer using any appreciable amount of labor is located in relatively large rather than small places.

PRICE OF LABOR

Annual Wages Paid

Table 35 not only shows the number of wage earners and the wages paid in the fertilizer industry for each Census year but also gives the percentage of change from the preceding Census year. There has also been included in this table figures of fertilizer tonnage in these respective years in order that the changes could be correlated with the wage changes.

Impact of Production Decline on Wages

Certain generalizations may be derived from this tabulation. It seems that in years of declining production, labor has felt the burden of the keener competition and wages have declined more rapidly than did production. Conversely as production increased there is a definite lag as to wage adjustments and even the number of workers does not increase commensurately with the increased production.

(*) "The Farm Chemurgic", Wm. J. Hale, Chemical Foundation, N. Y. P.4

TABLE 35

PRODUCTION, NUMBER OF WAGE EARNERS AND WAGES PAID SHOWING PERCENTAGE CHANGE FROM PRECEDING CENSUS PERIOD AND WAGES PAID PER TON PRODUCED (*)

Year	Production Thousands Short Tons	Production Per Cent Change	Wage Earners Number	Wage Earners Per Cent Change	Wages Paid Thousand Dollars	Wages Paid Per Cent Change	Wages per Ton Produced	Annual Wage per Worker
1919	8,285		26,296		25,363		$3.06	$965.00
1921	6,039	-27.1	16,898	-35.7	16,026	-36.8	2.65	948.00
1923	7,626	26.2	18,572	9.9	16,365	2.1	2.15	880.00
1925	8,229	7.9	19,644	5.8	17,743	8.4	2.16	903.00
1927	8,123	-1.3	18,612	-5.3	17,650	-0.5	2.17	948.00
1929	9,320	14.7	20,926	12.4	17,884	1.3	1.92	855.00
1931	6,968	-25.2	14,551	-30.4	12,146	-32.1	1.77	832.00
1933	5,196	-25.4	13,063	-10.2	7,274	-40.1	1.40	557.00

Table 35 indicates that there has been a steady decline in the wages per ton of fertilizer produced. Table 36 shows that the value per ton of fertilizer has similarly decreased and that wages have maintained a relatively constant relationship to the value of the product.

Wages as a Cost Factor

The ratio of wages to cost of materials, containers, fuel, and purchased electrical energy in the fertilizer industry in 1933 was only 33.1 per cent of the same ratio for all manufacturing industries in that year. In the fertilizer industry this ratio was .101 as contrasted to a ratio of .305 for all manufacturing industries (**). This factor is very illuminating in considering why the fertilizer industry with labor representing such a small cost factor more readily adopted certain labor provisions in its code than would have been the case if labor had represented a larger percentage of total cost.

Labor Conditions in Pre-Codal Period

In order to determine the labor conditions in the fertilizer industry in the pre-codal period, The National Fertilizer Association on June 28, 1933 mailed a questionnaire to every manufacturer in the industry (***) This questionnaire was in the form of a payroll analysis schedule. The reports were arranged to show the Fall and Spring seasons of each year. Statistics covering the number of men employed were not sought as it was deemed that "man-hours worked" was a better yardstick for the industry, due to the decidedly seasonal nature of the business and the great turnover of labor.

(*) Average number of wage earners for the year, and total wages paid 1919-1929, Census of Manufactures, 1930, Vol. II, Table, 1, p. 686. 1931-1933, Census of Manufactures, 1933, Fertilizer Table 1, p. 17. Calculations made by Fertilizer Industry Study.

(**) A detailed tabulation of the basic statistics and of these ratios is contained as Exhibit 17 in Appendix II.

(***) A copy of the questionnaire is included as Exhibit 18 in Appendix II.

TABLE 36

RELATIONSHIP OF WAGES PAID TO VALUE OF PRODUCT

	Value of Product[1]	Wages Paid	Per Cent of Wages to Value of Product[2]	Production (Thousands Short Tons)	Value per Ton
1919	$281,144,000	$25,363,000	9.0	8,285	$33.94
1921	180,375,000	16,026,000	8.9	6,039	29.87
1923	183,089,000	16,365,000	8.9	7,626	24.01
1925	206,773,000	17,743,000	8.6	8,229	25.13
1927	190,385,000	17,650,000	9.3	8,123	23.44
1929	232,511,000	17,884,000	7.6	9,320	23.90
1931	140,718,000	12,146,000	8.6	6,968	20.28
1933	82,811,000	7,274,000	8.8	5,196	15.94

[1] The value of product is the price at the manufacturer's plant and includes not only profit but also certain expenses such as interest on funded debt which might not be included in true cost of production figures.

[2] This ratio is a rough approximation of the percentage that labor cost bears to the total cost of production.

(*) 1919-1929 Census of Manufactures, 1930, Vol. II, Table 3, p. 688
1931-1933 Census of Manufactures 1933, Fertilizer Table 2, p. 19

TABLE 37

HOURS WORKED PER WEEK FULL TIME MEN
SPRING SEASON, 1933 (*)

State	Sulphuric Acid Department Hours per Week	Superphosphate Department Hours per Week	Dry Mixing Department Hours per Week
Maine	-	-	57
Massachusetts	56	-	51
Connecticut and Long Island	-	-	56
New York (except Long Island	48	54	60
New Jersey	52	50	50
Delaware	-	-	57
Pennsylvania	-	53	56
Maryland	56	56	55
Virginia	79	53	55
North Carolina	79	59	57
South Carolina	80	59	56
Georgia	80	57	56
Florida (All east and south of counties of Suwanee, Columbia, Lafayette and Taylor)	84	52	56
Alabama and Florida (West of Apalochicola River)	84	61	58
Mississippi	84	60	61
Arkansas	-	-	59
Louisiana	55	72	55
Texas	56	-	51
Tennessee	84	60	57
Ohio	65	55	52
Kentucky	-	-	53
Indiana	-	51	52
Illinois	55	72	52
Michigan	60	54	54
California	-	-	52
Washington	-	-	49
Northern Area	53	53	55
Southern Area	77	59	56
Midwestern Area	60	58	52
Pacific Coast Area	-	-	52
UNITED STATES	66	57	55

(*) Compiled from 363 reports made to The National Fertilizer Association.

Reports were received from 363 plants in all sections of the country and the following tables 37-45, inclusive are summaries of data revealed by the analysis of the questionnaires.

Hours of Labor

Table 37 shows the hours worked per week for full time employees in the various departments of the fertilizer plants in different parts of the United States. It is apparent from these tabulations that the fertilizer industry during the rush season worked abnormally long hours measured by the standards of most industries.

Wage Rates

Relative Importance of Different Departments

Table 38 indicates the relative importance of wage rates in the different departments of the plants of the fertilizer industry. It not only shows the percentage of total man-hours worked in each department but also the percentage of total wages paid in each department for the year ended June 30, 1933.

TABLE 38

PERCENTAGE OF TOTAL ACTIVITY AND OF TOTAL WAGES IN EACH DEPARTMENT
YEAR ENDED JUNE 30, 1933 (*)

Department	Spring Season 1933		Fall Season 1932		Year Ended June 30, 1933	
	Per Cent Man-Hours	Per Cent Wages	Per Cent Man-Hours	Per Cent Wages	Per Cent Man-Hours	Per Cent Wages
Sulphuric Acid	3.0	4.4	7.3	8.5	4.4	5.9
Superphosphate	4.0	4.2	8.6	7.0	5.4	5.3
Dry Mixed Fertilizer	82.6	74.4	63.1	56.5	76.6	67.8
Watchmen	4.4	4.7	9.8	8.7	6.0	6.1
Mechanics	6.0	12.3	11.2	19.3	7.6	14.9
	100.0	100.0	100.0	100.0	100.0	100.0

Wage Rates by Classifications of Labor (By Areas)

Table 39 not only gives the weighted average wage rates for the various classifications of labor in the fertilizer industry but also indicates the geographical differences in these rates.

Common Labor

Wage Rates by States

Since Table 38 indicated that 76.6 per cent of the man-hours reported by the industry were for common labor in the dry mixing department, Table 40 has been incorporated to show in detail the geographical distribution

(*) Compiled from 363 reports made to The National Fertilizer Association.

of wage rates for this classification of common labor for both the Spring season of 1929 and that of 1933.

Distribution of Man-Hours by Wage Rate Classifications

Table 41 shows the distribution of the man-hours worked by common labor not only in accordance with the rate received per hour but also by geographical areas.

Wage Rates at Ports versus Interior Points

In connection with the wage rates for common labor the available data from the questionnaires showed for certain States the differences between the wage rates paid at port cities and at interior points. This data has been included in Table 42.

Wage Rates by Population of Communities

For a few States data was available showing the variation in wage rates for common labor according to the population of communities and those data have been presented in Table 43.

TABLE 39

SUMMARY OF WEIGHTED AVERAGE* WAGE RATES PAID FOR VARIOUS CLASSIFICATIONS OF LABOR IN THE FERTILIZER INDUSTRY DURING THE SIX MONTHS ENDED JUNE 30, 1933 (*)

(By Areas)

	North	South	Western	Pacific Coast	United States
	Cents per Hour	Cents per Hour	Cents per Hour	Cents per Hour	Cents per Hour
MANUFACTURING SULPHURIC ACID:					
Acid Makers	67.2	51.6	68.5	--	57.6
Assistant Acid Makers	45.9	21.2	--	--	36.0
Burnermen	31.7	19.0	24.4	--	21.9
Chambermen	39.8	23.0	39.6	--	29.6
Common Labor	26.0	16.5	39.7	--	22.2
MANUFACTURING SUPERPHOSPHATE:					
Millers	36.7	18.8	33.7	--	26.2
Mixers	30.9	18.7	31.7	--	24.1
Den Labor	34.3	16.2	29.5	--	20.2
Common Labor	25.7	13.9	27.3	--	19.6
MANUFACTURING DRY MIXED FERTILIZERS:					
Gang Foremen	47.7	38.7	50.2	53.7	42.5
Scalemen	32.9	21.4	30.2	43.1	25.7
Bag Loaders and Sewers	28.8	15.6	28.2	39.9	19.1
Common Labor	26.5	13.7	27.0	35.9	16.8
WATCHMEN:	26.5	20.2	27.8	32.0	22.5
MECHANICS:	49.0	38.8	49.9	48.3	42.9

* Weighted by number of man-hours worked multiplied by the average rate paid by each manufacturer reporting.

(*) Compiled from 363 reports made to The National Fertilizer Association.

TABLE 40

SUMMARY OF FERTILIZER INDUSTRY WAGE RATES FOR COMMON LABOR (LOADING AND SHIPPING) IN DRY MIXING DEPARTMENTS - ALL TYPES OF PLANTS (*)

State	Number of Reports	Spring Season 1929 Average Hourly Rate* Cents	Spring Season 1933 Average Hourly Rate* Cents	Decrease From 1929 Per Cent
Maine	4	38.8	28.2	27
Massachusetts	4	39.6	31.6	20
Connecticut and Long Island	7	46.8	28.5	39
New York (except Long Island)	5	41.3	31.8	23
New Jersey	11	42.3	30.3	28
Delaware	5	30.2	16.1	46
Pennsylvania	12	39.3	26.7	32
Maryland	30	34.8	20.7	41
Virginia	29	30.4	15.6	49
North Carolina	42	26.8	13.2	51
South Carolina	26	22.5	12.4	45
Georgia	50	21.8	11.5	47
Floria (All east and south of counties of Suwanee, Columbia, Lafayette and Taylor)	19	26.6	18.3	31
Alabama and Florida (All west of Apalachicola River)	37	21.2	11.5	46
Mississippi	7	24.0	11.7	51
Arkansas	7	24.2	13.5	44
Louisiana	9	27.1	17.8	35
Texas	7	28.1	16.9	40
Tennessee and Kentucky	8	25.6	16.3	36
Ohio	19	41.1	25.7	38
Indiana	9	38.1	26.2	31
Illinois	5	40.7	24.5	40
Michigan	3	42.0	33.3	21
Missouri and Wisconsin	4	46.9	31.1	34
Kansas, Iowa and Minnesota	3	43.0	38.3	11
California and Washington	11	42.9	35.9	16
TOTAL UNITED STATES	363	28.6	16.8	41

* Weighted average equals rates paid by each manufacturer multiplied by "number of man-hours worked."

(*) Compiled from 363 reports made to The National Fertilizer Association.

TABLE 41

SUMMARY OF WEIGHTED AVERAGE RATES PAID PER HOUR TO COMMON LABOR* AND NUMBER OF MAN-HOURS WORKED BY COMMON LABOR IN THE MANUFACTURE OF DRY MIXED FERTILIZERS DURING THE SIX MONTHS ENDED JUNE 30, 1933 (*).

(By Areas) Distribution Cents	Man-Hours Worked	Per Cent of Total	Weighted Average Rate for Area Cents
NORTHERN AREA:			26.5
7.6 to 12.5	12,061	.8	
12.6 to 17.5	119,830	7.9	
17.6 to 22.5	313,286	20.7	
22.6 to 27.5	397,105	26.2	
27.6 to 32.5	436,627	28.8	
32.6 to 37.5	187,231	12.3	
37.6 to 42.5	48,352	3.2	
42.6 to 47.5	1,066	.1	
TOTAL	1,515,758	100.0	
SOUTHERN AREA:			13.7
7.5 and less	179,320	2.8	
7.6 to 12.5	2,916,602	45.1	
12.6 to 17.5	3,003,183	46.4	
17.6 to 22.5	283,094	4.4	
22.6 to 27.5	80,179	1.2	
27.6 to 32.5	3,317	.1	
TOTAL	6,466,145	100.0	
WESTERN AREA:			27.0
12.6 to 17.5	11,204	2.1	
17.6 to 22.5	76,133	14.1	
22.6 to 27.5	265,531	49.2	
27.6 to 32.5	111,130	20.6	
32.6 to 37.5	69,124	12.8	
42.6 to 47.5	6,314	1.2	
TOTAL	539,436	100.0	
PACIFIC COAST AREA:			35.9
22.6 to 27.5	5,057	9.6	
32.6 to 37.5	24,281	46.0	
37.6 to 42.5	20,297	38.4	
47.6 to 52.5	3,183	6.0	
TOTAL	52,798	100.0	
UNITED STATES:			16.8
7.5 and less	179,320	2.1	
7.6 to 12.5	2,928,663	34.3	
12.6 to 17.5	3,134,187	36.5	
17.6 to 22.5	672,713	7.8	
22.6 to 27.5	747,872	8.7	
27.6 to 32.5	551,574	6.4	
32.6 to 37.5	280,616	3.3	
37.6 to 42.5	68,649	0.8	
42.6 to 47.5	7,380	0.1	
47.6 to 52.5	3,183	.0	
	8,574,157	100.0	

* About 75 per cent of all labor, based on man-hours worked is "common labor".

(*) Compiled from 363 reports made to The National Fertilizer Association.

TABLE 42

COMPARISON OF HOURLY WAGE RATES FOR COMMON LABOR IN DRY MIXING DEPARTMENTS AT PORT AND INTERIOR POINTS IN CERTAIN STATES DURING SPRING, 1933 (*)

	Entire State Cents Per Hour	Port Points Cents Per Hour	Interior Points Cents Per Hour	Increase Of Port Over Interior Points Cents Per Hour	Percentage of Employment* At Port Points Per Cent	Percentage of Employment* At Interior Points Per Cent
New Jersey	30.3	38.8	25.3	13.5	37	63
Maryland	20.7	21.9	18.7	3.2	80	20
Virginia	15.6	15.4	16.6**	- 1.2	80	20
North Carolina	13.2	14.8	11.3	3.5	51	49
Georgia	11.5	12.0	11.4***	0.6	24	76

* Based on man-hours worked by reporting factories.

** Includes Richmond, Petersburg, and other large interior points.

*** Includes Atlanta and other large interior points. Atlanta average rate was 13.5 cents.

(*) Compiled from 363 reports made to The National Fertilizer Association.

TABLE 43

COMPARISON OF HOURLY LABOR RATES FOR COMMON LABOR IN DRY MIXING DEPARTMENTS DURING SPRING OF 1933 ACCORDING TO POPULATION OF COMMUNITIES (*)

(Cents Per Hour)

	Over 100,000 Cents	76,000 to 100,000 Cents	51,000 to 75,000 Cents	26,000 to 50,000 Cents	11,000 to 25,000 Cents	Under 10,000 Cents	Entire State Cents
Maryland	21.9	-	-	-	17.1	22.3	20.7
South Carolina	-	-	12.7	12.5	9.8	10.1	12.4
Georgia	13.7	12.5	11.2	10.0	11.6	10.2	11.5
Ohio	27.1	-	-	-	22.9	24.1	25.7

(*) Compiled from 363 reports made to The National Fertilizer Association.

Wages Paid in Superphosphate Departments

Table 44 presents a summary of the average wage rates paid for various classifications of labor in the superphosphate departments by States for the Spring seasons of 1929 and 1933.

Wages Paid in Sulphuric Acid Departments

Table 45 presents a summary of average wage rates paid for various classifications of labor in the sulphuric acid departments by States for the Spring seasons of 1929 and 1933.

TABLE 44

SUMMARY OF AVERAGE WAGE RATES PAID FOR VARIOUS CLASSIFICATIONS OF LABOR IN THE SUPERPHOSPHATE DEPARTMENTS BY STATES FOR THE SIX MONTHS ENDED JUNE 30, 1939 AND THE SIX MONTHS ENDED JUNE 30, 1933 (*)
(Cents Per Hour)

	Millers		Mixers		Den Labor		Ordinary Labor	
	1939	1933	1939	1933	1939	1933	1939	1933
	Cents		Cents		Cents		Cents	
Massachusetts	50.8	40.0	41.6	33.1	43.0	37.4	39.6	29.2
New York (except Long Island)	50.0	39.2	49.4	39.0	48.7	35.7	48.5	30.6
New Jersey	50.1	34.7	51.5	34.5	48.5	31.7	46.7	31.6
Pennsylvania	42.0	31.0	44.0	33.0	—	--	42.0	25.0
Maryland	52.2	37.5	43.4	29.9	47.4	36.9	40.5	25.0
Virginia	31.6	19.0	33.7	19.6	34.6	18.7	32.2	15.0
North Carolina	36.9	23.4	35.4	19.5	30.7	15.8	25.6	14.3
South Carolina	30.1	15.1	29.7	17.6	27.5	15.3	23.5	14.1
Georgia	28.3	16.3	29.4	16.7	28.3	15.5	24.1	12.6
Florida (All east and south of counties of Suwanee, Columbia, Lafayett & Taylor)	33.3	22.8	33.2	28.3	27.2	18.0	33.7	28.6
Alabama and Florida (West of Appalachicola River)	24.2	17.0	24.4	13.5	25.7	15.1	19.5	10.4
Mississippi	27.0	14.7	30.9	16.0	25.6	12.2	23.2	11.9
Louisiana	31.6	17.7	32.4	20.6	31.8	17.4	28.3	18.1
Texas	42.4	30.4	43.1	20.8	40.0	20.8	31.9	20.2
Tennessee	33.8	17.5	32.4	19.3	32.0	19.5	28.3	17.3
Ohio	49.1	33.7	48.2	31.9	50.5	29.7	41.0	28.8
Illinois	50.0	31.3	49.2	29.5	44.2	25.9	40.6	25.2
Indiana	45.1	23.4	48.8	23.3	43.5	23.6	34.6	23.0
Kentucky	30.0	25.0	32.6	27.5	35.0	30.3	30.3	25.1
Michigan	55.0	44.3	55.0	40.7	50.0	32.9	40.0	36.0
Northern Area	51.5	36.7	44.2	30.9	46.8	34.3	40.9	25.7
Southern Area	31.0	18.8	31.4	18.7	29.6	16.2	25.6	13.9
Midwestern Area	48.6	33.7	48.6	31.7	48.6	29.5	38.2	27.3
UNITED STATES	38.5	26.2	37.1	24.1	34.1	20.2	33.9	19.6

(*) Compiled from 368 reports made to The National Fertilizer Association.

TABLE 45

SUMMARY OF AVERAGE WAGE RATES PAID FOR VARIOUS CLASSIFICATIONS OF LABOR IN THE SULPHURIC ACID DEPARTMENTS BY STATES FOR THE SIX MONTHS ENDED JUNE 30, 1929 AND THE SIX MONTHS ENDED JUNE 30, 1933 (*)
(Cents Per Hour)

State	Acid Maker		Assistant Acid Maker		Burnermen		Chambermen		Common Labor	
	1929	1933	1929	1933	1929	1933	1929	1933	1929	1933
	Cents		Cents		Cents		Cents		Cents	
Massachusetts	83.3	73.1	51.0	50.0	47.0	42.0	42.6	34.7	44.3	40.1
New York (except Long Island)	74.0	80.0	74.0	48.0	48.0	--	50.0	40.0	40.0	32.0
New Jersey	101.1	86.9	--	--	47.1	38.0	61.2	47.8	44.8	34.6
Pennsylvania	67.0	--	--	--	--	--	45.0	--	--	--
Maryland	66.0	56.2	45.0	45.1	48.7	29.4	62.2	40.4	44.9	25.9
Virginia	56.4	48.8	--	--	32.8	23.8	39.0	33.2	28.8	21.0
North Carolina	71.2	47.8	--	--	28.1	19.9	32.7	23.5	25.3	14.3
South Carolina	67.1	47.4	28.5	22.5	29.0	16.5	31.0	23.4	26.9	15.8
Georgia	56.3	44.9	29.9	--	24.5	16.9	28.4	18.6	22.8	14.1
Florida (all east and south of counties of Suwanee, Columbia, Lafayette & Taylor)	66.3	54.0	42.0	35.0	32.5	22.3	32.5	22.3	33.9	18.3
Alabama and Florida (west of Apalachicola River)	50.9	43.8	--	--	30.6	18.8	37.5	19.6	28.5	14.0
Mississippi	50.1	40.0	27.3	--	27.2	14.5	27.9	16.6	25.0	--
Louisiana	59.5	--	47.5	--	30.6	17.5	34.3	20.0	29.4	18.1
Texas	109.5	82.0	--	--	37.5	27.8	45.0	35.0	35.0	--
Tennessee	119.5	61.8	33.3	15.8	30.0	18.6	34.9	15.3	26.4	15.0
Ohio	76.1	65.1	--	--	49.4	28.0	49.6	38.8	40.0	41.0
Illinois	48.2	73.7	--	--	45.0	22.5	50.0	31.5	42.5	19.9
Michigan	75.0	76.5	--	--	50.0	--	60.0	57.0	--	--
California	81.0	--	--	--	62.0	--	64.0	--	--	--
Northern Area	71.2	67.2	50.4	48.9	48.4	31.7	52.6	39.8	44.7	26.0
Southern Area	66.0	51.6	32.4	21.2	28.8	19.0	31.9	23.0	27.3	16.5
Midwestern Area	72.1	68.5	--	--	46.9	24.4	49.7	39.6	40.2	38.7
Pacific Coast Area	81.0	--	--	--	62.0	--	64.0	--	--	--
UNITED STATES	62.4	57.6	38.4	36.0	35.6	21.9	38.0	29.6	30.0	22.2

(*) Compiled from 363 reports made to the National Fertilizer Association.

PRESIDENT'S REEMPLOYMENT AGREEMENT

During the period in which industry leaders were preparing a proposed code to submit to NRA, members of the fertilizer industry showed a commendable spirit of cooperation in carrying out the purposes of NIRA.

After certain modifications which were deemed to be necessary had been made, the President's Reemployment Agreement was generally adopted throughout the industry. This modified agreement which was accepted by the industry on August 21, 1933, is included in Appendix II, labelled Exhibit 19.

Maximum Hour Provisions

The agreement incorporated provision for a basic forty-hour week, with exceptions for periods of emergency and for employees engaged in continuous operations in the manufacture of sulphuric acid, phosphoric acid and superphosphate. Provision for compensating employees for overtime was made on the basis of time and one-third for hours worked beyond the basic maximum.

Minimum Wage Provisions

4 The following schedule of minimum wage rates was incorporated in the agreement:

(1) 35 cents per hour in the Northern Area of the United States
(2) 25 cents per hour in the Southern Area of the United States
(3) 35 cents per hour in the Midwestern Area of the United States
(4) 40 cents per hour in the Pacific Coast Area of the United States

Effect of Provisions of Agreement

As the President's Reemployment Agreement was adopted late in the summer of 1933, and was effective only during the months of September and October, a relatively inactive period in industry operations, results from the operation of the agreement obviously could not be impressive. The provisions, however, are of importance inasmuch as they provided the basis used by the code committee of the industry in preparing their proposed code under NRA.

LABOR PROVISIONS AS SUBMITTED AND APPROVED IN NRA CODE

Collective Bargaining

So far as has been ascertained, labor organizations had made very little progress in organizing the common labor which makes up a predominant part of the labor employed in the fertilizer industry. There is also no indication in the record that there were organizations of company unions existent at the time of the presentation of a Code of Fair Competition. The code, however, included in Section 1 of Article IV the provisions pertaining to collective bargaining, pursuant to Section 7a of the National Industrial Recovery Act. These

provisions were as follows:

"a. That employees shall have the right to organize and bargain collectively through representatives of their own choosing, and shall be free from the interference, restraint, or coercion of employers of labor, or their agents, in the designation of such representatives or in self-organization or in other concerted activities for the purpose of collective bargaining or other mutual aid or protection.

"b. That no employee and no one seeking employment shall be required as a condition of employment to join any company union or to refrain from joining, organizing, or assisting a labor organization of his own choosing.

"c. That employers shall comply with the maximum hours of labor, minimum rates of pay, and other conditions of employment, approved or prescribed by the President."

Maximum Hours of Labor

Section 2a of Article IV entitled "Maximum Hours of Labor" provided:

"No employee in the Fertilizer Industry shall be required or permitted to work more than 40 hours in any one week or eight hours in any one day except as follows:"

At the public hearing on the Code as proposed, it was stated by the NRA Labor Advisor (*) that at that time the Labor Advisory Board had no standard policy but was in favor of a 30-hour or a 35-hour week which had been their recommendation for the President's Reemployment Agreement. It is evident that the code for the Cotton Textile Industry, Code No. 1, set a precedent for a 40-hour week which was followed in many of the succeeding codes, including the fertilizer code. The farm equipment code which was code No. 39 had also adopted a 40-hour week for its code.

At the Public Hearing, David Kaplen, Labor Advisor, speaking as a representative of the American Federation of Labor, suggested a 36-hour week with a tolerance for the months of March and April which would permit a 60-hour week in those months. (**) The Code sponsors were not persuaded to adopt the suggestion.

(*) Transcript of Public Hearing on the Code of Fair Competition for the Fertilizer Industry, September 6, 1933, p.144. (Copy in NRA Fertilizer Industry Files)

(**) Ibid, p. 201.

Exceptions to Maximum Hours Provisions

It was held necessary to make exceptions to the maximum hours provisions of the code in the cases of particular classes of workers for whom it was felt that these provisions should not be made applicable.

Supervisory Officials' Exemptions

Article IV, Section 2, Subsection a 1 of the code exempted "foremen, superintendents, managers, salesmen, chemists, and officials." There were no comments on the exemption of this class of employees at the time of the public hearing, although the President's Reemployment Agreement, as adopted by the fertilizer industry, had had a $35.00 per week qualification in order to have people described in this paragraph eligible for exemption from the maximum hours of labor above prescribed. While it seems that the word "Officials" might have required further explanation, an official explanation or interpretation of this word was never issued.

Continuous Operation Exemptions

Article IV, Section 2 (a) 4.

"Employees engaged in any continuous operation when other competent employees are readily available for such work shall not be required or permitted to work more than 40 hours in any one week, and in no case more than 48 hours in any one week."

In the President's Reemployment Agreement continuous operation had been defined "as the manufacture of sulphuric acid, phosphoric acid, and superphosphate", thus limiting continuous operation to those particular processes in a fertilizer plant. In the original presentation of the Code, this language was removed by Dr. Troxell (*) of the Labor Advisory Board, who stated that this limitation was merely an explanation and did not limit the fertilizer industry to those particular departments, although it is evident from the previous form of the provision that it was the intent of the industry to so limit it.

At the time of the presentation of the code there was some discussion as to what was meant by "readily" in the phrase "when other competent employees are readily available for such work", but no changes were made in the language as presented.

It is interesting to note that this code as suggested and adopted did not contain the limitations that the employees engaged in continuous operation were not to exceed 10 per cent of the total number of employees in the plant as was the case in the President's Reemployment Agreement as adopted by the fertilizer industry.

(*) Ibid, p. 122

Table 31 shows that the percentage of man-hours employed in the manufacture of sulphuric acid was 4.4 per cent, and in phosphoric acid and superphosphate 5.4 per cent for the reporting companies in the spring season of 1933, but the combined figures for these Departments are much higher in the fall season, so that the industry probably found the restriction of the P.R.A. burdensome.

There were no official requests for explanations or interpretations, nor were there compliance cases involving this particular section.

Maintenance Exemptions

Article IV, Section 2, Subsection a 5:

> "Repair shop crews, engineers, electricians, and watching crews shall not be required or permitted to work more than 40 hours in any one week, with a tolerance of 10 per cent, except in the case of emergency."

Interpretations of Maintenance Exemptions

It should be noted that the language of this provision as written is equivalent to saying that repair shop crews, engineers, electricians, and watching crews shall not be required or permitted to work more than 44 hours in any one week, since there is no qualification as to the utilization of the tolerance. That this was the practical interpretation of the Administration of this phrase is evidenced by the fact that in issuing Administrative Order #67-16, dated April 12, 1934, George L. Berry, Division Administrator, in defining the word "emergency" stated:

> "I note that repair shop crews, engineers, electricians, and watching crews may not work more than 44 hours a week 'except in the case of emergency'."

Nothing is found in the records to indicate that the Labor Advisory Board raised any question on this point at any time.

It was also necessary that the word "emergency" be more carefully defined and in the above referred to interpretation "emergency" was defined as "emergency maintenance or emergency repair work involving breakdowns and protection of life or property. It does not refer to an unusual amount of business." So far as has been ascertained there were no compliance cases involved, thus indicating that the indefinite provision made for "emergency" as set forth in this section was not abused.

General Averaging Provisions

Article IV, Section 2, Subsection (a) 2 read as follows:

> "During the rush of the planting season the hours of labor may exceed the maximum above prescribed by eight hours a week, and in the case of skilled key men the hours of labor may exceed the

maximum above prescribed by 20 hours in any week, but in no event shall employees be permitted to work more than an average of 40 hours a week over any consecutive four-months' period."

Neither at the public hearing nor in the written record transmitting the opinion of the Labor Advisory Board to the deputy did the Labor Advisory Board go on record as opposing the averaging of hours provision contained above. However, the attitude of the Labor Advisory Board even at that time, and much more strongly as NRA experience developed, became more and more opposed to the inclusion of any averaging provision in codes. It was felt that such provisions tended to vitiate the beneficial effects in spreading employment that might otherwise have been obtained through maximum hours provisions. It was also held that it would be difficult to obtain compliance when an averaging provision for hours of labor was extended over as long a period as four months.

Interpretations of Averaging Provision

Rush of Planting Season

Several phrases in this provision caused difficulty during the administration of the code. One question which arose was in defining the phrase, "during the rush of the planting season". That is as to whether or not it meant the planting season in the vicinity of the plant employing the labor or whether it meant the planting season of the farmer to whom fertilizer was sold. An official interpretation (*) was issued to the effect that the rush of the planting season meant rush of the planting season in the territory in which the fertilizer was sold.

It should be pointed out that the code did not set up the mechanics by which a particular plant identified rush of the planting season for its own plant so that from an administrative point of view it would be difficult to determine just when such period began and when it ended. Furthermore, in the cases of those plants which sold merchandise in various sections of the United States or even in foreign countries, the rush of the planting season varied so that in an extreme case rush of the planting season might have been construed to mean the entire year.

The latter part of the provision prohibited working these employees "more than an average of 40 hours a week over any consecutive four-months' period", caused considerable misunderstanding on the part of the industry. It was inserted in the code in that particular way on recommendations of the Advisory Boards in order to prevent the Industry from splitting its peak season. To illustrate, if the code permitted the employer to name a specific four-months' period, it would have been possible to have the months of March and April, which represent the peak of the shipping season, fall in separate four-months' periods. This is the interpretation that many employers wished to place upon the provision. The language, however, is specific and prohibits this

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(*) Administrative Order No. 67-42. (In NRA Fertilizer Industry Files)

practice, and March and April would have to be included under the language "over any consecutive four-months' period".

Need For Defining "Skilled Key Men"

The phrase "skilled key men" was also ambiguous, although there is no record at the time of the public hearing as to what the Labor Advisory Board thought was meant by this provision. A later definition as recommended by the Labor Advisory Board, was as follows: "Employees, the duties of whom necessarily affect the flow of work to respective groups of other employees." (*) The Fertilizer Recovery Committee under date of February 19, 1935 requested a definition of "a skilled key man". They stated "it has been our assumption that a key man is one performing duties which performance results in furnishing work for other employees and the work of the other employees being dependent upon completion of the work of key men". They stated that their understanding was "that as a key man would not of necessity be a foreman, different types of plants would require different types of key men. We would consider as an illustration the following jobs as typical of key men in one type of dry mixing plant:

Bag sewers
Baggers
Oilers
Weighers
Mixers
Tractor operators
Locomotive operators
Crane operators
Hoist operators"

The requested interpretation was re-written within NRA but the Review Division under date of April 26, 1935 stated that they could not approve it as the definition of "skilled key man" was considered too broad. The Review Division offered the comment that "a key man is generally considered one upon whom, because of knowledge or experience not held by and not readily imparted to others, the successful conduct of manufacturing processes is especially dependent". The Review Division, however, approved the interpretation that "a person because of his skill in a particular operation may be considered a key man and such person need not be a foreman nor be directly responsible for the work of other employees". This interpretation of the Review Division was never officially approved.

Office Employees' Averaging Provision

Article IV, Section 2, Subsection a 3:

"Office employees shall not be required or permitted to work more than an average of 40 hours a week in any four-months' period."

At the time of the presentation of the code this was a six-months'

(*) Interview of Mr. Al F. O'Donnell, Unit Chief, Fertilizer Industry Study, with Mr. Tom Hunter, Labor Advisor, November 1, 1935.

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averaging provision, and Dr. Troxell of the Labor Advisory Board (*) at the public hearing objected to the lack of a provision in the Code for fixing a limit on the hours to be worked by the office force. He contended that the provision that the office force should not exceed 40 hours of work in a six-months' period would permit of working the force 80 hours a week for three months and then laying them off for another three months.

Although the records do not disclose what transpired after the public hearing, a compromise was apparently effected, inasmuch as the averaging provision was cut to four months and the Labor Advisory Board in their final recommendation to the deputy did not again raise this particular point. There seems to have been no question raised by Dr. Troxell or any other interested parties at any time on the fact that, according to this provision, there was absolutely no limitation on the number of hours in any one day which an office employee could be required to work.

So far as has been ascertained there were no compliance cases which arose as the result of this provision.

In spite of the liberality of these terms for office employees, there was one request made for an exemption from this provision in the case of the Davison Chemical Company which was being reorganized under Section 77-B of the Corporate Reorganization Act, which corporation was granted permission to work ten accounting employees unlimited hours from January 10 to June 30, 1935, inclusive (**)

Minimum Rates of Pay

Article IV, Section 3 a on Minimum Rates of Pay said:

"No employee in the Fertilizer Industry shall be paid less than the following: 35 cents an hour in the Northern Area, 25 cents an hour in the Southern Area, 35 cents an hour in the Midwestern Area, 40 cents an hour in the Pacific Coast Area, and 20 cents an hour in Puerto Rico."

The Labor Advisory Board at the time of the Public Hearing was able to have stricken from the proposed code a suggestion that in the Southern Area only 20 cents an hour be paid at interior points which were not ports. The transcript of hearing contains a statement by Major Eckel of the Labor Advisory Board that the North, South differential in the code as proposed was greater than in any other branch of

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(*) Transcript of Public Hearing on Code of Fair Practices and Competition presented by the Fertilizer Industry, September 6, 1933, p. 149. (In NRA Fertilizer Industry Files)

(**) Administrative Order No. 67-45. (In NRA Fertilizer Industry Files)

the Chemical Industry (*). In transmitting the recommendations of the Labor Advisory Board to the Deputy, the Labor Advisory Board (**) stated:

"We cannot accept the labor provisions of this code because of the 25 cent hourly wage rate in the Southern area, considering that this is practically and entirely a male Industry, and also in view of the arduousness of the work and its relation to other codes already adopted it is our position that 30 cents an hour in the Southern area is the minimum which should be established.

"This Code is also in need of a clause which would provide for the maintenance of differentials for workers receiving more than the minimum wages."

Apparently this point of view developed subsequent to the public hearing.

It is interesting to observe that the records do not show that the Deputy Administrator in submitting this code to the Administrator for approval did not explain why he was not following the recommendations of the Labor Advisory Board with reference to these Southern differentials.

Geographical Wage Areas

"b. The Northern area comprises Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, New Jersey, Maryland (except the Eastern Shore), New Castle County of Delaware, District of Columbia, and West Virginia.

"c. The Southern area comprises Kent and Susses Counties of Delevare, the Eastern Shore of Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, Texas, and Tennessee.

"d. The Midwestern area comprises Ohio, Illinois, Indiana, Kentucky, Missouri, Kansas, Nebraska, South Dakota, North Dakota, Colorado, New Mexico, Arizona, Wyoming, Montana, Michigan, Wisconsin, Minnesota and Iowa.

"e. The Pacific Coast area comprises Washington, Oregon, California, Idaho, Nevada, and Utah."

These four sections set up the areas referred to in Article IV, Section 3 a in which the varying rates of wages were to be paid. At

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(*) Transcript of Public Hearing on Code of Fair Practices and Competition presented by the Fertilizer Industry, September 6, 1933, p. 143. (Copy in NRA Files)

(**) Letter from Leo Wolman, Chairman, Labor Advisory Board to Deputy Administrator Williams, dated October 24, 1933. (In NRA Fertilizer Industry Files)

the time of the public hearing the main discussion centered about the inclusion or non-inclusion of Delaware and certain parts of Maryland in the Southern Zone. In early drafts of the code, all of Delaware and the Eastern Shore of Maryland were included in the Southern Zone, but in the code as finally adopted and as above quoted, only Kent and Sussex Counties of Delaware and the Eastern Shore of Maryland were included in the Southern Area. This was a continuation of conditions as they had existed prior to the code with reference to wage rates in those particular sections under consideration, as discussed by Mr. Brand at the time of the public hearing (*)

Overtime Provisions

Article IV, Section 2, Subsection b:

"Overtime shall be paid at the rate of one and one-third times the normal rate for all work in the excess of eight hours a day, except in the case of office employees."

There seems to have been no discussion at the time of the public hearing or subsequently, by the Labor Advisory Board or others, concerning payment of time and one-third for overtime, nor the exemption of office employees from the payment of such overtime. Apparently then the provision of time and one-third was a heritage from the minimum specified under the President's reemployment Agreement which had been adopted by the majority of fertilizer manufacturers.

Interpretations on Overtime Provisions

This provision, nevertheless, was ambiguous and while there was correspondence between the Deputy Administrator and the Code Authority seeking clarification, no official interpretation was issued (**).

It also became necessary to clearly define the limits of the word "day", and an interpretation was issued, defining the period as the time between midnights (***).

As National Recovery Administration experience was acquired, and long after the fertilizer code was approved, the Labor Advisory Board adopted the phrase "in any 24 hour period" to definitely establish an employee's right to any overtime pay. Since the code was never reopened none of these later methods of handling certain phases of the labor problem were incorporated.

(*) Transcript of Hearing on the Code of Fair Competition for the Fertilizer Industry dated September 6, 1933, p. 155. (In NRA Files)

(**) Correspondence in NRA Fertilizer Industry Files, Labor Folder.

(***) Administrative Order 67-49. (In NRA Files)

The Labor Advisory Board, neither at the time of the public hearing nor subsequently, raised any question regarding the exemption of office employees from the payment of overtime wages.

Day of Rest Provision

Article IV, Section c stated:

"Every employee in the Fertilizer Industry shall be entitled to one day of rest a week."

At the time of the public hearing, the Labor Advisory Board did not raise any question as to the phraseology "shall be entitled to". Obviously, the word "entitled" did not insure the probable intent of the provision, and the language should have read somewhat as follows in order to be effective: "No employee shall be permitted to work more than six days in any one week." In fact the industry recognized this fact in their voluntary labor agreement, submitted after the Schechter decision, and have rephrased this provision.

Interpretation of Day of Rest Provision

In order to give clarification to the meaning of the phrase "one day of rest a week", an interpretation was issued which read:

"Every employee is entitled to one day of rest each week of seven days; Sunday or any other day." (*)

Child Labor Provision

Article IV, Section 4 — Child Labor Prohibited:

"No employee under the age of 16 years shall be employed in the Fertilizer Industry."

With the exception of substitution of the word "employee" for the word "worker" this provision was adopted as presented. John J. Watson, President of The National Fertilizer Association, at the time of the public hearing stated that due to the heavy nature of the work that it was not customary to employ childern in the Industry (**).

In 1930, there were 1090 male and 26 female wage earners from 10 to 17 years of age in the fertilizer industry out of a total of 28,169 persons engaged in the industry. (***)

(*) Administrative Order No. 67-18. (In NRA Files)

(**) Transcript of Hearing on the Code of Fair Competition for the Fertilizer Industry, September 6, 1933, p. 142. (In NRA Files)

(***) Fifteenth Census of the United States, Population Volume V, General Report on Occupations, 1930, Bureau of the Census, 1933, Table 2, p. 431.

At the time this code was approved the National Recovery Administration had not yet developed standard code provisions but under date of December 27, 1934, over a year later, the Labor Advisory Board recommended that the industry adopt the standard phraseology with reference to child labor which was

> "No person under 18 years of age shall be employed in the Industry except as (list here specific occupations such as office boys, office girls, messengers, etc.). No person under 16 years of age shall be employed in the Industry in any capacity. In any state any employer shall be deemed to have complied with this provision as to age if he shall have on file a certificate or permit duly signed by the authority in such state empowered to issue employment or age certificates or permits showing that the employee is of the required age."

The industry agreed to amend the code to incorporate the revised provision providing it could be handled without a public hearing (*). The Deputy thought that this could be done but no action had been taken up to the time of the Shechter decision (**)

It is significant, however, that the fertilizer industry was not amenable to reopening their code for any amendments.

Reclassifications of Functions Prohibited

Artile IV, Section 5:

> "Reclassification of Functions Prohibited. --There shall be no evasion of this Code by reclassification of the function of employees. An employee shall not be included in any of the exceptions set forth above unless the identical functions were identically classified on June 15, 1933."

There appears to have been no discussion of this section at the time of the public hearing, although there might reasonably have been objection to the language because of the interpretation which might conceivably have been placed on it. These might have led to a misunderstanding on the part of an individual employee whose job was changed and who might therefore not fully understand exactly what his rights were in the matter of exemptions and tolerances in the matter of hours. The evident intent of this provision was to handle a reclassification of a job and not of an employee. However, no issues were raised regarding the provision, nor were there any compliance cases, explanations or interpretations requested of the Administration in connection therewith.

(*) Letter from Charles J. Brand, Executive Director of the Code Authority, to Ovid E. Roberts, Jr., Deputy Administrator, March 8, 1935. (NRA Fertilizer Industry Files, Labor Folder)

(**) Letter from Deputy Administrator Ovid E. Roberts, Jr., to Charles J. Brand, Executive Secretary of the Code Authority, March 9, 1935. (In NRA Fertilizer Industry Files, Labor Folder)

Mr. Hockley, Receiver of the Davison Chemical Company, at the time of the public hearing on the proposed voluntary labor agreement, November 8, 1935, recognized this fact and suggested a change in the language to take care of it inasmuch as it had created a great deal of confusion in the minds of employees at the Davison plant.

No Provision For Adjustment of Wages Above the Minimum

In the aforementioned letter of Leo Wolman, Chairman of the Labor Advisory Board, it was brought out that this code did not contain any provision referring to an equitable adjustment of wages above the minimum. This is an omission which apparently escaped discussion at the time of the public hearing but which was incorporated in many codes even prior to the adoption of the fertilizer code. There is no record in the files that the deputy attempted to have this provision inserted in the code as sent to the President due to the recommendation of the Labor Advisory Board.

Complaints of Alleged Violation of Labor Provisions

Considering the number and type of firms engaged in the Industry compliance with the labor provisions of the code was uniformly good, there being record of only 90 complaints of alleged violation. In 44 of these cases, an investigation disclosed no violation; 38 cases were adjusted, and 8 were left on hand unsettled (*).

(*) Testimony of Mr. Brand, National Industrial Recovery Administration hearing on Title A (labor provisions) of the proposed voluntary agreement for the Fertilizer Industry, November 8, 1935, p. 37.

TABLE 46

ANALYSIS OF 78 LABOR COMPLIANCE CASES (*)

Number of Complaints	78
Violations found (alleged)	39
Adjusted by field offices with restitution of back wages	No information
Investigated Complaints - adjusted	32
Referred to State District Attorney for prosecution	0
Referred to Washington or regional offices for further action	1
No violation established	39
Pending at time of Supreme Court decision	6

Classification of Charges	Number of Complaints
Article IV, Sec. 2 - Hours in excess of maximum	25
Article IV, Sec. 3 - Wages below minimum	23
Article IV, Sec. 2(a) Working 7 days per week	3
Article IV, Sec. 2(b)-Failure to pay correct overtime	3
Child Labor	0
Reducing wages	0
Article IV, Sec. 2(b) - Seeking back wages for overtime	1
Labor Provisions not posted	0
Article IV - General labor violation (only information)	1

Methods of Handling Labor Complaints

Although not authorized by NRA to handle labor complaints in the first instance, 10 cases of alleged violation of labor provisions were referred to and handled by the code authority. This work was taken most seriously by the code authority representatives, as indicated in the following summary of 6 of these 10 cases handled and the settlement obtained from the alleged violators.

(*) Letter from Ovid E. Roberts, Deputy Administrator to Walter Mangum, Business Cooperation Section 3, August 15, 1935.

TABLE 47

SUMMARY OF LABOR COMPLAINTS HANDLED BY THE FERTILIZER CODE AUTHORITY (*)

Date Received	Result of Investigation of Complaint	Nature of Complaint: Minimum Rates	Nature of Complaint: Maximum Hours	Nature of Complaint: Other Labor Complaints	Number of Employees Affected	Amount of Wage Restitution	Audit Expense Paid by Producer
Nov., 1934	Found true	x	x	-	228	$1,234.99	$65.00
Feb., 1935	All charges found untrue	x	-	Bad working conditions	113	none none	none none
Mar., 1935	Found true	x	x	-	194	676.38	87.13
Mar., 1935	Found true	x	x	-	149	511.99	11.95
Mar., 1935	Found true	x	x	-	218	854.51	35.00
Apr., 1935	Found true	x	x	-	18	745.89 (**)	10.84
Total					920	$4,023.76	$209.92

(*) Supreme Court Decision rendered before case was finally disposed of by Code Authority.

(**) Data compiled by C. E. Willis, after investigation of Code Authority files, October 29, 1935.

As set forth in the Administrative Chapter of this report, the code authority for the fertilizer industry was not successful in their efforts to obtain approval of a plan for handling labor complaints within the Industry.

LABOR ACCOMPLISHMENTS OF THE CODE

Available Statistics

In determining to what extent the objectives of National Industrial Recovery Act in spreading employment and increasing purchasing power were accomplished in the fertilizer industry during the period in which the code was in operation, it is necessary to use the labor data provided by the Bureau of Labor Statistics. The Bureau of Labor Statistics monthly obtains statistics of the number of employees, amount of pay-roll, including overtime, and number of man-hours, the data being collected each month for a payroll period which ends nearest the 15th of the month.

This is the only continuous series of labor data (*) and this data is based on a sample gathered in one week of each month from a limited number of firms in the industry and extrapolated to obtain estimates for the entire industry. The statistics are therefore only as accurate as the sample is representative of the whole Industry.

There has been incorporated in the Fertilizer Industry Archives as Exhibit C a detailed description of the method used by the Bureau of Labor Statistics in compiling and analyzing labor data for the fertilizer industry. Some such explanation is necessary in order that the limitations of these data and the qualifications in their use may be better understood.

Misuse of Statistics

There have been many glaring examples of the incorrect use of these statistics by comparing them with other labor data which are not comparable. For instance, there has been repeated comparison of the Bureau of Labor Statistics figures which include all classes of workers in the fertilizer industry with the figure for common labor in the shipping and dry mixing departments as determined by The National Fertilizer Association pre-code questionnaire (**).

Such misuse of statistics is dangerous as the indicated results show that the Code was much more effective than it really was.

Interpretation of Labor Data

In interpreting the data on employment, payrolls, man-hours and wage rates contained in these tabulations on labor statistics in the fertilizer industry, it must be constantly borne in mind that what happened to labor during the period in which the code was in operation cannot be attributed

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(*) In census years the Census of Manufactures of the Department of Commerce, Bureau of the Census, obtains data on persons engaged, wage earners employed by months, salaries and wages. This series is a continuous series only in the sense that we have it available for census years and even then the coverage is not as correct in the biennial census as it is in the decennial census. The Census gathers its data for a week in each month of the Census year which includes the 15th day of the month.

(**) Extract from hearings before the Committee on Finance, United States Senate, 74th Congress, testimony relating to the Code of Fair Competition for the Fertilizer Industry, April 12, 1935.

Transcript of the public hearing on the proposed voluntary labor agreement for the Fertilizer Industry, November 8, 1935, p. 32.

Proceedings of the Eleventh Annual Convention, The National Fertilizer Association, The National Fertilizer Association, 1935. p. 27.

Fertilizer Review, July, August, September, 1933, The National Fertilizer Association, p. 3.

solely to the code itself, various external factors having marked effect upon labor. Typical of such factors is the fluctuating demand for fertilizer and the various forces which tend to effect demand. As demand fluctuates, the physical volume of production also varies and it is practically impossible to determine what portion of a change in employment is due to the change in production.

While we have pointed out elsewhere in this report that there are no complete figures of production available for the entire codal period for this industry, the production can be approximated by the estimated annual consumption for which we do have figures. The consumption of fertilizer for 1932, 1933, 1934 was 4,379,350; 4,868,540; and 5,532,956 short tons respectively, whereas in 1935 it is estimated that it will exceed 6,200,000 tons (*). This increase in production would normally mean increased employment but it is practically impossible to determine how much increased employment is necessitated by a certain percentage change in production, due to the fact that various plants are mechanized to a different degree, that plants are operating at various percentages of their efficient capacity, and that in some plants increased production will be accomplished only in a scale of diminishing returns to effort expended due to their relatively complete utilization of existing capacity. These qualifications must be kept in mind in interpreting the figures of the Bureau of Labor Statistics.

Summary of Labor's Improved Position During the Code

The results of labor's changed position in the first Spring season (the busy period of the year) of codal operation as contrasted to the comperative period of the preceding year showed that the wage provisions of the code resulted in an increase of 41.5 per cent in average hourly wage rates per week which caused an increase in weekly wage rates of 6.1 per cent. The hour provisions of the code spread employment by 50 per cent and purchasing power was increased by 62 per cent increase in the industry's payroll. In citing these effects on labor it is recognized that the increase of 13.6 per cent in the Industry's production tonnage between 1933 and 1934 caused by the increase in the farmer's income and demand for fertilizer contributed to these labor results.

During the second year of codal operation, production tonnage made a further increase of 13.8 per cent over that of the first year of codal operation. This is reflected by the comparative Spring season labor statistics which show increased total man-hours of 6.6 per cent. This increase did not result in further spreading employment as the average man-hours per week increased 3.2 per cent and the number employed in the industry decreased 3.5 per cent while the average hourly wage rates per week decreased 3 per cent. The individual worker's weekly pay envelope decreased .4 of 1 per cent.

(*) Testimony of Charles J. Brand, public hearing on voluntary labor agreement on Fertilizer Industry, November 8, 1935, p. 27. (Copy in NRA Fertilizer Industry Files).

Comparison of Pre-Code and Codal Labor Data

Since our statistics on employment show that the months of January, February, March and April of each year represent a peak of employment and number of man-hours worked for the industry the labor data for these months are especially significant. They provide a good basis of comparison because in 1933 they antedated the President's Reemployment Agreement. In 1934 the code had been given a couple of months to get into operation; in 1935 they give a basis for a second year codal operation in which it is alleged that the code was being less rigidly observed (*) but yet which was prior to the Schechter decision.

The following two tables are self-explanatory; the first represents the employment, payrolls, man-hours and wage rates for the Spring season and the second, the percentage changes in the various items of labor data for the respective periods under consideration.

TABLE 48

FERTILIZER INDUSTRY "SPRING SEASON" EMPLOYMENT, PAYROLL, MAN-HOURS, AND WAGE RATES, BEFORE AND DURING CODE PERIOD (*)

(Monthly Averages--January, February, March and April of Each Year)

"Spring Season" (Jan.Feb. Mar.Apr.)	Number employed (thousands)	Weekly payroll (thousands of dollars)	Average man-hours per week	Total man-hours per week thousands	Average hourly wage rates (cents)	Weekly wage rates (dollars)
1926	26.3	456.3				18.35
1927	23.8	416.2				18.90
1928	25.2	414.2				17.78
1929	26.3	412.5				17.86
1930	27.2	414.4				17.71
1931	20.8	314.4				16.37
1932	14.7	195.4	42.4	627.4	30.8	12.94
1933	14.8	148.5	44.5	674.1	24.4	10.91
1934	22.2	240.8	33.4	692.7	34.5	11.57
1935	21.4	257.2	34.5	739.6	33.4	11.52

(*) Evidence presented at the public hearing on the Fertilizer Industry Voluntary Labor Agreement by Al F. O'Donnell, Unit Chief, Fertilizer Industry Study, Division of Review, N.R.A., Transcript of the Hearing, November 8, 1935, p. 73. (Copy in N.R.A. Files) Original data is in the Fertilizer Industry NRA Archives, Exhibit A, Tables I - IV.

(*) "Our Industry Under the Code" by Charles J. Brand, Proceedings of the Eleventh Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1935, p. 23.

TABLE 49

COMPARISON OF LABOR CONDITIONS FOR CORRESPONDING "SPRING" PERIODS BEOFRE AND DURING N.R.A. (*)
(Based on monthly averages for January, February, March and April of each year)

	1934 per cent change from 1933	1935 per cent change from 1933	1935 per cent change from 1934
Number employed	49.8	44.8	-3.5
Weekly payroll	62.2	73.3	6.8
Average man-hours per week	-25.0	-22.5	3.2
Total man-hours	2.8	9.4	6.6
Average hourly wage rates per week	41.5	37.5	-3.0
Weekly wage rates	6.1	5.4	-0.4

(*) Evidence presented at the public hearing of the Voluntary Labor Agreement by Al F. O'Donnell, Unit Chief, Fertilizer Industry Study, Division of Review, NRA, Transcript of the Hearing, November 8, 1935, p. 74. (Copy in NRA Files)

Post Codal Labor Data Compared with Codal and Pre-Codal Periods

In order to determine what happened in the post codal period it is necessary that we consider labor data for a period which is not an active fertilizer season. We are fortunate in being able to get Bureau of Labor Statistics figures for June, July, August, and September, 1935, and we can compare these figures with comparable figures for the corresponding periods of the three preceeding years. The summer months of 1932 represent the depth of the depression in the pre-codal period. In the figures for the summer of 1933 the President's Re-employment Agreement had begun to have a psychological effect althoug not adopted by th Fertilizer Industry until August 21, 1933, the code not becoming effective until November 10, 1933. The summer of 1934 represents a comparative period of codal operation.

The following two tables give us a comparison of the essential labor data for corresponding period before NRA, during PRA, during NRA code and after the NRA code and are largely self-explanatory:

TABLE 50

FERTILIZER INDUSTRY EMPLOYMENT, PAYROLL, MAN-HOURS, AND WAGE RATES FOR CORRESPONDING PERIODS BEFORE NRA, DURING PRA, DURING NRA CODE AND AFTER NRA CODE (*)

(Monthly averages June, July, August and September of each year.)

4 summer months (June, July, Aug. & Sept.	Number employed (thousands)	Weekly payroll (thousands of dollars)	Average man-hours per week	Total man-hours per week (thousand)	Average hourly wage (cents)	Weekly wage rates (dollars)
1926	17.0	321.1				20.58
1927	14.4	283.8				21.36
1928	15.8	294.3				20.86
1929	16.8	269.1				20.92
1930	16.3	290.6				20.31
1931	10.5	184.9				17.47
1932	7.6	105.1	41.6	292.6	33.9	14.21
1933	10.3	116.8	42.9	405.1	28.3	12.44
1934	12.2	151.5	32.7	368.8	49.6	13.28
1935	11.6	164.5	34.5	402.1	38.6	13.25

TABLE 51

COMPARISON OF LABOR CONDITIONS FOR CORRESPONDING PERIOD BEFORE NRA, DURING PRA, DURING NRA CODE AND AFTER NRA CODE (*)
(Based on monthly averages for June, July, August, and September of each year)

	PRA compared with pre NRA	NRA compared with pre NRA	Post NRA compared with pre NRA	Post NRA compared with NRA
	1935 per cent change from 1932	1934 per cent change from 1932	1935 per cent change from 1932	1935 per cent change fro 1934
Number employed	35.6	60.5	52.6	-5.0
Weekly payroll	11.1	44.2	56.3	8.5
Average man-hours per week	3.1	-21.4	-17.2	5.5
Total man-hours per week	38.4	26.0	37.4	9.0
Average hourly wage rate per week	-16.5	19.8	13.9	-5.0
Weekly wage rates	-12.5	-6.7	-6.8	-0.2

(*) Evidence presented at the public hearing of the Voluntary Labor agreement by Al F. O'Donnell, Unit Chief, Fertilizer Industry Study, Division of Review, NRA, Transcript of the Hearing, November 8, 1935, pp. 76-77. Computed from Bureau of Labor Statistics data as revised by NRA and contained in the Fertilizer Industry NRA Archives, Exhibit A, Tables I-IV.

In order that comparisons may be made for the codal period with a large number of years preceding codal operation the following tabulation shows a comparison of the relative employment, payroll and wage rates of the fertilizer industry from 1926 to 1935 using 1929 as a basis of comparison.

TABLE 52

FERTILIZER INDUSTRY EMPLOYMENT, PAYROLL AND WAGE RATES, 1926-1935 (*)

(1929-100)

	Monthly Average Entire Year			Monthly Average January, February March and April			Monthly Average June, July, August and September		
	Number Employed (%)	Weekly Payroll (%)	Weekly wage rates %	Number Employed (%)	Weekly Payroll (%)	Weekly Wage rates %	Number Employed (%)	Weekly payroll (%)	Weekly wage rates %
1926	99	109	99	100	111	103	101	111	98
1927	89	98	104	90	101	106	86	98	102
1928	95	101	104	96	101	99	94	102	100
1929	100	100	100	100	100	100	100	100	100
1930	98	96	98	103	101	99	97	101	97
1931	69	68	85	79	76	92	63	64	84
1932	52	42	73	58	47	72	45	36	68
1933	62	41	61	56	36	61	61	40	59
1934	79	56	64	84	58	65	73	52	63
1935				81	62	65	69	57	63

(*) Computed from Bureau of Labor Statistics data contained in the Fertilizer Industry NRA Archives, Exhibit A, TablesI-IV.

Wages above the Minimum during the Code

It has been previously indicated that though Labor Advisory Board in making its recommendations to the Deputy Administrator, recommended that a clause for equitable adjustment of wages above the minimum be included in the Code. Such a provision was not included.

Statistics are not available to determine what happened to the wages above the minimum during the period of codal operation. Some evidence is in the files to indicate that in certain instances wages above the minimum were reduced at the time the code was put into effect to compensate for the shorter hours for this class of employees. One complaint was that a foreman who was reduced in hours from 60 to 40 a week was reduced in pay from $30.00 to $20.00 per week (*). The question was raised with The National Fertilizer Association at a meeting in Mr. Brand's office, October 25, 1935, as to whether or not the Association had any evidence as to wages paid above the minimum and as to whether or not they had ever conducted a survey with regard to this subject. No one present at the meeting had any knowledge of any existing data on this subject and those present included the leading executive officers of the National Fertilizer Association: Mr. Charles J. Brand, Executive Secretary and Treasurer; Mr. F. S. Lodge, Open Price Section; Mr. John Moran, Cost Accounting Section; and Miss Josephine Feeley, Assistant to Mr. Brand.

Relationship of Increases in Wages to Increase in Prices

From Table 53 it is apparent that although labor cost increased 52 per cent from 1933 to 1934, nevertheless this increased labor cost represented only 6.8 per cent of the increase in the actual net cash dealer price received by the manufacturer at his plant. Chart X is a graphic presentation of the data in Table 53.

(*) Labor Complaints against Standard Wholesale and Phosphate Company. Referred to in Memorandum from District Compliance Director, Joseph J. Skorup, Jr., Norfolk, Va. District to Mr. Donald R. Renshaw, Field Director, dated December 22, 1933. (Copy in N.R.A. Fertilizer Industry Files)

TABLE 53

SUMMARY OF MIXED FERTILIZER COSTS IN THE PRINCIPAL FERTILIZER CONSUMING AREAS IN THE UNITED STATES FOR LEADING GRADES (*)

Territories Combined	1933	1934	Increase Dollars	Increase Percentage
Cost at Plant:				
Materials	$9.77	$11.02	$1.25	13
Bags	.88	1.33	.45	51
Labor: Mixing shipping, etc.	.61	.93	.32	52
*Other Costs	4.24	4.40	.16	4
Total Cost at Plant	15.50	17.68	2.18	14
Actual Net Cash (Dealer)Price Received by Manufacturer At Plant	13.98	16.68	4.70	34
PROFIT or LOSS	**1.52	1.00	2.52	—

(*) Includes tax taxe; light, power, fuel; taxes; depreciation on physical property at income tax rates; office, sales, and administrative expenses; bad debts; insurance; etc.
(**) Indicates loss.

POST-CODE CHANGES IN LABOR CONDITIONS

Subsequent to the Schechter decision, The National Fertilizer Association sent out a circular letter to the members of the Industry requesting information as to changes from code provisions with regard to wages, hours and working conditions. The following tabulation shows the results of this circularization:

(*) Table 53 is based on the general report (included as Exhibit 20 of Appendix II) issued by The National Fertilizer Association as a result of their cost survey. This survey was undertaken at the request of NRA so that farmers or their Congressional representatives who complained of prices would have the facts on the cost of production.

These cost figures are based upon a cost accounting system used for years by The National Fertilizer Association and approved with Modifications by NRA during the codal period. It is highly technical and many of its provisions controversial. The reasons for the adoption of many of the arbitrary assumptions were explained by John Moran, Cost Accountant, The National Fertilizer Association, in a speech reported in the 1935 Proceedings of the Annual Convention of the National Association of Cost Accountants, a copy of which is included in Appendix II as Exhibit 21.

CHART X

COMPARISON OF COSTS AND SELLING PRICES

NINE REPRESENTATIVE GRADES OF MIXED FERTILIZER
SPRING SEASONS 1933 AND 1934

(F. O. B. FACTORY BASIS)

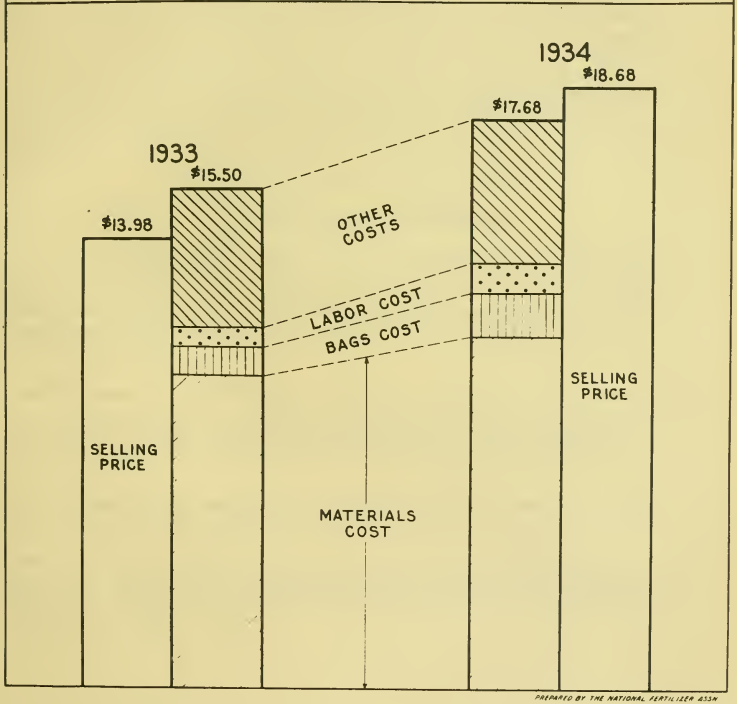

TABLE 54

RESULTS OF NATIONAL FERTILIZER ASSOCIATION QUESTIONNAIRE ON POST CODE LABOR CONDITIONS (*)

Number reporting	198
No changes in wages or hours	188
Increased hours from 40 to 48	1
Increased wages	2
Reduced wages 5 cents per hour	2
Minor changes	5

The only additional available evidence of breaking away from the codal labor standards in the industry, is the testimony of Mr. C. F. Hockley of the Davison Chemical Company (*). He stated that certain fertilizer manufacturers had cut their wage rates so that their labor cost per ton is only about 50 per cent of what the labor cost would have been were the code rates still in force in those plants. He did not cite specific instances but stated that it was the degree in which code rates had been deviated from rather than the number of people that had done it which was the vital consideration.

THE PROPOSED VOLUNTARY LABOR AGREEMENT

Desire of Industry to Cooperate

The Fertilizer industry is one of the industries which seems to have been satisfied with the results achieved under their code of Fair Competition. It is alleged that they had operated at a nominal profit for the first time in several years (*) and the industry was, therefore, anxious to preserve the gains made under NRA, both as to capital and labor.

(*) Data contained in letters from Charles J. Brand, dated July 18, 1935; July 24, 1935; August 8, 1935. (Copies in NRA Fertilizer Industry Files)

(**) Transcript of hearing of the voluntary labor agreement for the Fertilizer Industry, November 8, 1935, p. 91.

(***) Testimony of Charles J. Brand, Secretary of the National Fertilizer Association, at National Recovery Administration Hearing on Title A of Proposed Voluntary Agreement for the Fertilizer Industry, November 8, 1935, p. 28.

Public Resolution No. 26 of the 74th Congress was adopted, extending until April 1, 1936, certain provisions of Title I of the National Industrial Recovery Act in setting forth the authority of the President to approve Voluntary Agreements which contain labor provisions in addition to certain concessions from anti-trust prosecution. The fertilizer industry immediately set about taking advantage of this opportunity afforded them by the President.

It so happened that about two weeks after the Schechter decision, the annual convention of the National Fertilizer Association was held at White Sulphur Springs, and a tentative outline of a plan was presented to the nearly 500 members of the Industry attending the convention. (*).

Plan Considered at Regional Meetings

Regional meetings for presentation and discussion of the agreement were held following the convention in all districts of the United States, except California. Members representing in excess of 92 per cent of the production of the industry attended these meetings (**).

Procedure in Handling Agreement

In accordance with procedure which had been prescribed, The National Fertilizer Association submitted to NRA the labor provisions of the proposed agreement for consideration. These provisions were duly noticed on October 28, 1935 for a public hearing to be held on November 5, 1935. Title A (Labor Provisions) of the proposed Voluntary Agreement is included in Appendix II of this report, and is labelled Exhibit 22.

(*) Supra.

(**) Supra.

Labor Provisions Substantially as in Code

That it was the general desire of the industry to maintain the standard of labor conditions established by their code is indicated by the fact that essentially the same minimum hourly rates of pay and limitation of maximum hours as contained in the code were incorporated in the voluntary agreement. Provision was also included to continue the definite privilege extended employees to bargain collectively, as under Section 7-a of the NIRA.

Code Provisions of Agreement not Approved

Following the public hearing held on November 8, 1935, the labor provisions as proposed in the voluntary agreement were taken under advisement by NRA officials, but up until the time of writing, (February 1, 1936) they had not been approved or made effective.

CODE PROVISIONS CLARIFIED

It is of interest to note that certain of the code provisions which had undoubtedly been hurriedly prepared, and which had been found to be ambiguous in the experience of actual operation, were revised in the interest of clarification. In doing this, a majority of the ambiguities and discrepancies which were pointed out in the discussion of the Code labor provisions in this chapter were removed (*).

(*) A detailed analysis of the difference between the N. R. A. Fertilizer Code provisions and those of the proposed Voluntary Labor Agreement are contained as Exhibit 23 of Appendix II.

CHAPTER IV

THE DISTRIBUTION AND PRICES OF FERTILIZER

Scope of Study

This chapter treats of the distribution and prices of fertilizers and fertilizer materials. The quantity and value of the products distributed, the market areas in which sold, the number, economic activities, characteristics and purchasing power of the customers, - all have direct bearing on the distributive mechanism set up to market them, and the prices at which they are sold. To critically analyze and evaluate the methods and practices followed in the distribution of these products it is important to know as far as possible why, how, and under what conditions the existing status has developed.

This chapter also treats of the kinds of fertilizer and fertilizer materials sold, the amounts sold annually, and by seasons, the trends in amounts sold, where and why consumed, by whom consumed and under what conditions, how and by whom distributed, together with consideration of prices of fertilizers and the factors affecting them. As to each of the above there is discussed the status quo at the time of the submission of the Code, the Code provisions and their effect on distribution and prices and the post codal situation and the present outlook.

Distribution of Fertilizer Materials and Mixed Fertilizers to Consumers

Total annual Sales

In Table 4 of Chapter I, the tonnage of fertilizer sold in each year from 1910 - 1935 was tabulated. Table 55 indicates the tonnage by States and by geographical districts (*)

As will be noted from Table 4 which presents data on tonnage sold from 1910 to 1935 inclusive, the total tonnage has during this entire period ranged from the low of 1932, 4,379,000 tons to the high of 1930, 8,163,000 tons. It is also seen that by 1935 the total sales has advanced to 5,500,000 tons while The National Fertilizer Association estimate for 1935 is 6,000,000 tons. In other words the last two years' business has been not far off from the pre-war five year average (1910-1914) of 6,135,854 tons, and that of the period of 1930-1934 inclusive, 6,195,363.

Limitations of Sales Data

With reference to the U. S. totals here presented and to the State details in Table 55, it should be pointed out that while they are referred to as "consumption" figures they are not strictly that.

(*) Included in Appendix II as Exhibit 24 is a tabulation of the detailed statistics from 1920-1930 on which a portion of Table 55 is based.

Consumption of Fertilizer in the United States from 1910 to 1934.

(Based on fertilizer tag sales or sales records or census or estimates as shown in footnotes. Short tons by calendar year except as indicated)

State	1910–1914 average	1915–1919 average	1920–1924 average	1925–1929 average	1930	1931	1932 Revised	1933 Revised	1934 Preliminary	Percent change 1933 to 1934
New England	251,490	294,634	343,964	363,125	366,840	362,594	316,103	282,970	305,587	+ 8.0
Maine	113,760[2]	113,968[2]	168,275[2]	176,030[2]	195,650[2]	195,000[2]	175,000	149,000	155,000	+ 4.0
New Hampshire[2]	15,050	15,766	16,800	16,191	11,500	10,500	10,998	12,000	14,000	+ 16.7
Vermont[2]	12,640	16,400	17,200	17,203	16,060	15,031	11,652	12,000	13,087	+ 9.1
Massachusetts†	48,140	60,400	62,819	66,476	66,621	65,963	61,953	54,970	62,000	+ 12.8
Rhode Island[2]	7,300	8,900	8,860	9,047	8,000	7,000	6,500	8,000	11,500	+ 44.4
Connecticut	54,200[2]	76,200[2]	71,000[2]	69,178[2]	69,000[4]	70,000[4]	50,000[4]	47,000[4]	50,000	+ 6.4
Middle Atlantic	962,068	1,006,796	963,995	995,083	1,043,181	920,427	807,516	773,868	824,939	+ 6.6
New York[2]	267,680	284,972	246,000	258,992[2]	288,000	260,000	235,000	200,000	210,000	+ 5.0
New Jersey‡	142,416	152,408	163,011	145,880	166,445	150,800	137,661	127,515	125,000	- 2.0
Pennsylvania	331,123	319,996	320,969	354,895	333,715	287,127	241,865	246,000	260,000	+ 6.1
Delaware	36,600	44,880	42,541	41,764	43,000	36,361	33,120	28,477	35,000	+ 22.9
Maryland	168,670[4]	172,280[4]	156,006	169,491	177,021	146,139	124,890	132,876	146,129	+ 10.2
West Virginia[2]	30,680	32,260	36,468	44,571	45,000	40,000	35,000	40,000	48,560	+ 21.8
Southern	4,348,964	3,866,360	4,022,076	5,116,978	5,551,690	4,051,407	2,617,314	3,135,172	3,519,308	+ 13.2
Virginia[2]	386,358	424,769	429,785	432,496	449,178	379,269	279,904	307,589	336,015	+ 9.2
North Carolina[2]	750,262	806,023	1,012,453	1,250,066	1,242,036	1,003,406	696,167	889,310	876,874	— 1.4
South Carolina[2]	984,826	890,759	762,361	797,596	749,230	598,866	446,927	581,515[3]	572,279	— 1.6
Georgia[2]	1,146,284	884,832	683,013	804,868	928,606	686,191	357,352	416,283	549,376	+ 31.9
Florida[2]	199,709	216,787	334,066	414,103	488,624	418,787	381,178	352,897	423,032	+ 19.9
Alabama[2]	476,829	261,249	346,444	609,686	644,350	419,950	246,400	287,350	358,450	+ 24.7
Mississippi[2]	131,236	90,500	149,871	283,202	403,718	197,386	84,526	104,191	162,067	+ 55.6
Tennessee[2]	75,739	98,094	94,731	140,891	163,909	119,156	62,956	76,827	92,457	+ 20.8
Arkansas[2]	61,370	60,665	62,451	121,604	167,648	62,096	17,348	22,140	41,620	+ 88.0
Louisiana[2]	88,860	89,376	90,278	127,194	155,560	94,359	49,376	61,514	76,326	+ 24.1
Texas[2]	66,977	40,369	63,503	128,691	145,218	64,852	34,185	33,571	65,923	+ 96.5
Oklahoma	1,500[3]	3,000[3]	3,220[2]	6,461[4]	6,613[3]	7,089[3]	2,225[4]	1,985[3]	4,980[3]	+ 161.4
Mid-West	524,828	679,467	780,651	912,936	1,011,980	796,936	479,148	525,620	676,363	+ 28.7
Ohio	165,652	220,650	298,058	319,735	327,179	249,305	169,239	208,869	263,733	+ 26.8
Indiana[2]	177,654	186,930	204,004	233,245	224,000	166,000	80,384	97,862	149,003	+ 52.3
Illinois	6,200[3]	9,800[3]	14,991[3]	28,875	40,818	31,960	16,339[4]	17,392[4]	18,977[4]	+ 9.1
Kentucky[2]	69,200	94,200	82,400	87,700	113,992	105,192	55,220	58,273	62,520	+ 7.3
Missouri[2]	47,326	68,800	58,596	60,149	59,810	48,944	26,427	32,422	52,259	+ 61.1
Michigan	48,786[3]	78,300[3]	92,116	125,919[2]	145,000[2]	165,859	82,428[4]	80,000[2]	90,000[2]	+ 12.5
Wisconsin	3,300	6,800	13,800	24,846	51,222	45,610	26,513	18,311	19,669	+ 20.5
Minnesota	1,300[3]	3,600[3]	6,000[2]	12,343	16,251	17,600	9,320	7,257	9,165	+ 28.3
Iowa	.....	1,100[2]	3,700[3]	10,076[2]	24,597	22,000	10,000	5,000	5,000	0.0
Kansas[2]	4,910	10,107	6,111[2]	7,758[2]	6,355	2,983	2,546	1,735	5,497	+ 216.8
Nebraska[2]	.....	140	470	566	1,000	500	200	200	100	- 50.0
South Dakota[2]	.....	20	145	171	150	150	100	100	100	0.0
North Dakota[2]	.....	20[2]	160[3]	456[2]	1,518	1,000	432	230	300	+ 50.0
Western	48,514	45,678	84,787	136,027	186,566	174,719	159,230	160,910	176,759	+ 17.1
Montana[2]	.....	.....	.....	98	250	1,100	600	200	200	0.0
Wyoming[2]	.....	.....	.....	222	350	700	660	300	300	0.0
Idaho[2]	.....	60	340	772	2,100	1,000	1,500	1,000	500	— 50.0
Colorado	.....	60[2]	230[2]	619[2]	1,200[2]	3,875[2]	1,700[4]	1,000	800	— 20.0
Utah[2]	.....	60	900	454	300	4,000	3,000	1,000	500	— 50.0
Nevada[2]	.....	.....	23	43	90	50	50	1,000	500	+ 900.0
Arizona	.....	300[2]	425[2]	1,281[2]	4,000[2]	2,100[2]	50	50	500	+ 20.0
New Mexico	20[2]	400[2]	780[2]	1,552[2]	1,787	1,045	2,000[4]	1,000[2]	800[3]	— 5.3
California	43,234	35,998	70,384	106,792	142,489	132,349	541[4]	952[4]	1,221[3]	+ 28.3
Oregon[2]	3,960	6,700	6,900	9,193	12,500	11,000	127,298	123,908	147,938	+ 19.4
Washington[2]	1,300	2,100	5,400	11,702	21,500	17,500	10,000	9,500	9,000	— 5.3
United States	6,135,854	5,892,944	6,195,363	7,514,119	8,163,257	6,306,083	4,379,350	4,868,540	5,532,958	+ 13.6
							12,000	12,000	15,900	+ 25.0

[1] Estimated by State authorities. [2] Estimated. [3] Based on tag sales. [4] Year ended March 31. ‡ Year ended June 30. † Year ended October 31

As a matter of fact these figures are to a certain extent estimates. Footnote reference to the State table also show that for some States the data are based on tag sales which in some cases may represent a tonnage in excess of that actually sold. Tax tags must necessarily be purchased by the manufacturer in advance of sales. Thus in Indiana tax tags sold for 1934 covered 154,824 tons while the actual sales as nearly as could be determined from the sales reports of manufacturers amounted to 140,532 (*).

The National Fertilizer Association preliminary estimate for Indiana for 1934 was 149,003 tons (**).

However, the data presented are the closest approximations available as to actual tonnage sold and probably are not far from the facts. Further the percentages and other relationships calculated therefrom undoubtedly present for the greater part a true picture of the situation.

While as pointed out in greater detail below there is a significant relation between prices of farm crops and the fertilizer tonnage used, it should also be noted that there has been a constant trend toward the use of more fertilizer.

Farmers, The Principal Consumers

So much for the total bulk of fertilizer moving through the various channels of distribution from producer to consumer. According to estimate of The National Fertilizer Association (***), 98 per cent of the total fertilizer tonnage was used by farmers. The Census (****) of Agriculture in 1930 secured data on the amount of commercial fertilizer bought by farmers in 1929 and the total reported for the United States was 7,535,000 tons. In the same year the tonnage sold was stated by The National Fertilizer Association (*****) as 7,974,713 tons. The Census data would thus indicate that 93 per cent of the total tonnage sold in 1929 was sold to farmers. The apparent discrepancy between the two percentages, 98 and 93, is of little significance and is probably accounted for by the fact that the sales estimates in some 17 or 20

(*) Purdue University, Agricultural Experiment Station, Lafayette, Indiana, April, 1935, Table 5, p. 13.

(**) The Fertilizer Review, The National Fertilizer Association, March-April, 1935, p. 16.

(***) Application for Presentation of a Code of Fair Competition, p. 8. (Copy in N.R.A. Fertilizer Industry Files)

(****) Fifteenth Decennial Census, 1930, Census of Agriculture - Summary for the United States, Volume II, Part 2, Table 22, p.53.

(*****) The Fertilizer Review, May-June, 1931, p. 15, The National Fertilizer Association.

States are based on sales of tax tags which may and often do exceed the amount of tonnage actually sold. There is also a probability that some farmers did not adequately and accurately report to the Census.

The points of real significance are first - the total tonnage sold in the prosperous years and second - the very high per cent of the total which was sold to farmers. The latter point is important since it means that the fertilizer industry is dependent almost exclusively upon one class of customer. The income and general purchasing power of these customers is subject to frequent and violent fluctuations which reflect directly upon the potential sales of fertilizer.

Geographic Variations in Use

Knowing the tonnage sold and the fact that farmers constitute the chief market, the next question of prime significance in analyzing the distribution of fertilizers are: how many farmers use them; where are they located; is the consumption spread uniformly throughout the country and, if not, the reasons for the geographic differences. The Census of Agriculture (*) states that in 1930 there were 2,239,548 farms which reported the purchase of commercial fertilizer in 1929. This constitutes 33 1/3 per cent of the 6,288,647 farms in the United States in the Spring of 1930 when the Census was taken.

It must not be assumed from this that the fertilizer industry is reaching only a third of its potential market. The total number of farms as reported include types of farms such as ranges, on which fertilizers are not needed and many more so located with reference to soil type and soil fertility and producing such crops as to require very little if any commercial fertilizer.

There are, however, numerous farmers who could profitably use some or more fertilizer who have not yet learned so to do. Or putting it the other way around, these farmers constitute the unsold market. Research on the part of various interested agencies, and the state agricultural experiment stations, and also the experience of the more successful farmers, are gradually showing the way here and that they have been successful to a degree is shown by the constant uptrend in total tonnage during depression years as indicated by the following table:

TABLE 56

FERTILIZER TONNAGES BY DECADES (**)

Year	Total Tonnage
1880	1,150,000
1890	1,950,000
1900	2,200,000
1910	5,452,223
1920	7,176,754
1930	8,163,257

(*) Fifteenth Census, 1930 Agriculture, Vol. II, Part 3, Summary for the United States, Table 22, p. 53.

(**) (continued)

Map 1 covering the total expenditures in 1929 for all kinds of fertilizer shows great geographic variations in fertilizer consumption. Table 57 presents a summary of some of these variations by geographic divisions.

TABLE 57

COMMERCIAL FERTILIZER - 1929 (*)

	Per Cent of U. S. Crop Acreage	Tons Bought	Per Cent of Total	Farms Reporting	
				Total	Per Cent All Farms
United States	100.00	7,636,022	100.00	2,239,546	36.61
Divisions					
New England	1.00	345,303	4.58	68,318	54.69
Middle Atlantic	3.94	798,433	10.60	206,325	57.70
East North Central	15.66	773,057	10.26	318,594	32.96
West North Central	38.39	106,332	1.41	56,419	75.07
South Atlantic	7.55	3,707,305	49.20	808,175	76.36
East South Central	6.92	1,185,827	15.24	529,175	49.82
West South Central	16.05	431,885	5.73	212,773	19.92
Mountain	6.81	10,272	.14	3,824	1.58
Pacific	3.68	176,638	2.34	28,919	11.05

The South Atlantic States with but 7.5 per cent of the total crop acreage of the United States consumed 49 per cent of the total tonnage of fertilizer with an average of 364 pounds per crop acre. East North Central States with 15.6 per cent of the total United States crop acreage consumed only 10 per cent of the fertilizers with an average of only 26 pounds per crop acre. Still more striking are the figures for the West North Cental States which contain 38.3 per cent of the nation's

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(**) (Continued) 1880, 1890, and 1900 - American Fertilizer Handbook, 1935, p. 18, Ware Bros., Philadelphia, Pa.
1910 and 1920 - "Recent Developments on the Fertilizer Industry", Proceedings, Sixth Annual Convention of The National Fertilizer Association, table 8, pp. 102-103, The National Fertilizers Association. 1930 - Fertilizer Review - April, May, June, 1934.

(*) Based on data in Census of Agriculture, Fifteenth Decennial Census, 1930, Agriculture - United States Summary, Vol. II. A detailed tabulation of the State data is contained as Exhibit 25 of Appendix II.

crop acreage and used only 1.4 per cent of the total 1929 fertilizer tonnage.

Variation in Fertilizer Use on Particular Crops

Even though the principal use for fertilizers is on cotton, tobacco, potato and truck crops, it must not be reasoned therefrom that these crops always require fertilizers under all conditions. Rather, the limiting factors are the soil texture, soil fertility, and precipitation, or at least the availability of water through irrigation. There is a considerable difference in the extent to which farmers raising the same crops use fertilizers in different sections of the United States.

Data published by the Department of Agriculture (*) and the Bureau of the Census (**) show that large acreages of cotton in some states are not fertilized and some of the heaviest tobacco and potato producing areas are also only light users of fertilizers. This is graphically shown in maps 1 and 2, with reference to cotton. Note the relatively light use of fertilizer in the Mississippi Valley and Delta and the Texas cotton areas as compared with the cotton further east.

Variation in Percentage of Cotton Acreage Fertilizer

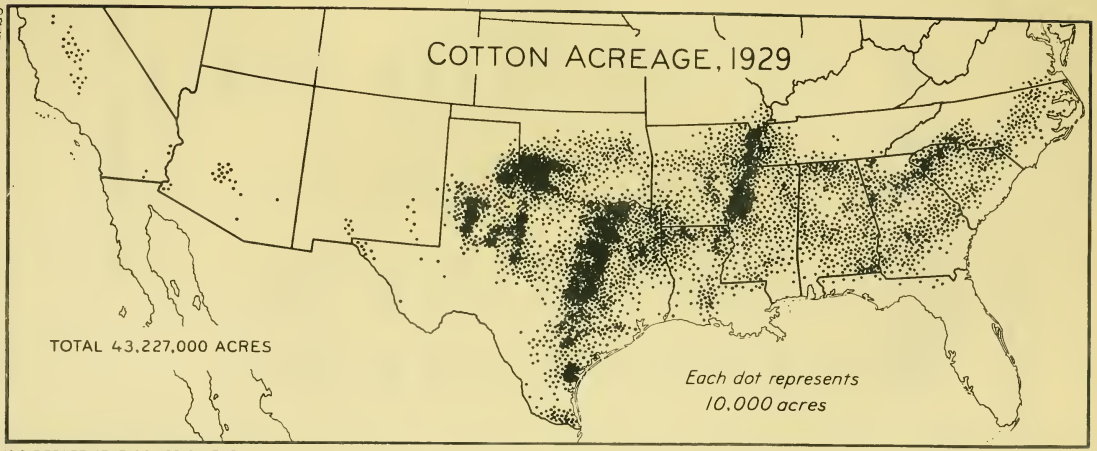
Table 58 shows the total number of acres in cotton, the number of acres in cotton, the number of cotton acres fertilized, the pounds per acre and the yield of cotton per acre for a number of states as of the year 1930. In North Carolina (97.0 per cent), South Carolina (90.9 per cent), Georgia (95.9 per cent) and Alabama (91.9 per cent), 90 per cent or more of the cotton acreage was fertilized while in the states of Mississippi (58.0 per cent), Arkansas (43.9 per cent), Texas (7.0 per cent), and Oklahoma (1.9 per cent), fertilizers were not so commonly used. There is indicated a considerable variation in the amount used per acre on that cotton which was fertilized. While it is true that most of the states which fertilized a large percentage of the cotton acreage had a higher per acre yield of cotton it should not necessarily be concluded from this that the farmers in the other states would have been better off had they fertilized more of their cotton and made heavier applications per acre. Missouri used only 145 pounds per acre but had a higher yield per acre than did Georgia and Alabama each of which fertilized over 90 per cent of their acreage and used 272 and 262 pounds per acre respectively. Missouri's average yield per acre was calculated on the basis of total acreage - not only the 7 per cent fertilized but also the 93 per cent not fertilized.

In the case of tobacco, an outstanding illustration of the same sort of thing is found in comparing the States of Georgia and North Carolina on the one hand and Kentucky and Tennessee on the other.

(*) United States Department of Agriculture, Yearbook, 1931, Table 586, p. 1070.

(**) Census of Agriculture, 1930 Vol. II, Part 2 - Summary for the United States.

MAP 3


COTTON ACREAGE, 1929
TOTAL 43,227,000 ACRES
Each dot represents
10,000 acres
U.S. DEPARTMENT OF AGRICULTURE
NEG. 24699
BUREAU OF AGRICULTURAL ECONOMICS

97.31

TABLE 58

COTTON ACREAGE FERTILIZED, AMOUNTS PER ACRE, AND YIELD OF COTTON PER ACRE (*)
(1930)

	Acres in Cotton		Fertilizer Used on Cotton		Yield of Cotton Per Acre
	Number	Per Cent Fertilized	Total Tons	Per Acre Pounds	Pounds
Southeastern States					
Virginia	90,000	95.5	17,544	408	228
North Carolina	1,644,000	97.0	338,938	425	233
South Carolina	2,211,000	90.9	331,980	330	227
Georgia	3,946,000	95.9	515,168	272	190
Alabama	3,830,000	91.9	460,334	262	188
Florida	105,000	91.4	11,904	348	232
South Central States					
Mississippi	4,296,000	58.0	274,120	220	169
Louisiana	2,125,000	52.6	90,450	180	162
Arkansas	3,985,000	43.9	162,152	185	112
Tennessee	1,252,000	54.4	75,101	216	156
Missouri	377,000	6.9	1,835	145	207
Southwestern States					
Texas	17,536,000	7.0	107,450	175	108
Oklahoma	4,165,000	1.9	7,262	175	106
Arizona	212,000				324
New Mexico	134,000				333
California	273,000				402

10-year average 1919-1928 was 106 pounds per acre.

(*) From U. S. Department of Agriculture Yearbook, 1931, p. 1070.

All four states are heavy producers of tobacco and while data are not available to show the number of acres of tabacco fertilized, it is a known fact that Georgia and North Carolina tobacco growers use relatively large amounts of fertilizers while the opposite is true in Kentucky and Tennessee.

Soils Vary Widely in Their Response to Fertilizer

Such data as the above led at once to the consideration of the reasons for these variations in use even on the same crops. The National Fertilizer Association states (*) that a survey which it made several years ago (1928) indicated that on the average, farmers estimated that they received a return of $3.50 for each $1.00 expended for fertilizer. At first thought it might seem as if some of the tobacco farmers of Kentucky and Tennessee and many of the cotton farmers of the Mississippi Valley and Delta and in Oklahoma and Texas were overlooking a good business proposition and the same might perhaps be thought of the farmers in the great corn and wheat belt where still smaller amounts of commercial fertilizers are used. However, the reason for the very heavy use of fertilizers in the Middle and South Atlantic and East Central states rests on the low fertility of the soils and consequent low production unless plant food is added.

This low fertility in at least some cases is due to natural reasons and in others to continual cropping under such farm systems as remove from the soil much greater quantities of plant food than are added. The following quotation is indicative of the low natural fertility in some of the soils in the Southeastern cotton belt:

> "The dominant need for notrogen may be better understood when it is explained that practically all soils in this territory, even when first cleared, have a very low nitrogen content.")**)

On the other hand some of the tobacco soils in Kentucky and Tennessee naturally contain a much higher percentage of plant food, an outstanding illustration being Fayette County, Kentucky, which is in the heart of the Blue Grass Region. The same is true of the Central and West Central cotton counties in the State of Texas. The following quotation describes the situation:

> "These soils sometimes respond to application of nitrogen and phosphoric acid, although fertilizers are uncertain - - - - - .In general the use of fertilizers on these soils has not been profitable." (***)

(*) Application for a Code of Fair Competition for the Fertilizer Industry, p. 1. (Copy in NRA Files)

(**) "Experiments with Commercial Nitrogenous Fertilizers" - Alabama Agricultural Experiment Station, Bulletin 238, August, 1932.

(***) Texas Agricultural Experiment Station (1934), Bulletin 498.

In some sections of light or scanty precipitation fertilizers as developed to date have not proven satisfactory. Thus in Kansas it is stated that it is only in "the extreme southeastern section where it (fertilizer) is used to any extent." (*) Further west in the state where precipitation is much lighter, fertilizers have not been found to give satisfactory results as is indicated by the following statement:

> "The use of commercial fertilizers in the lighter-rainfall sections frequently results in a decrease in the yield of grain crops because they stimulate early growth which uses an excess quantity of moisture, thus reducing the quantity available to mature the crop. This lack of moisture and the more tender vegetation resulting from the rapid growth make the plants more susceptible to 'firing'. The same condition may result from the use of excess quantities of fertilizer in the more humid sections." (**)

Quantity of Fertilizer Consumed by Kind

The annual tonnage figures of sales of fertilizer cover a variety of kinds and also for some kinds a variety of grades. Of the total tonnage sold in 1934, 74.12 per cent represented mixed fertilizers containing two or more of the plant food elements and mixed at the factory.

All three of these plant food elements were contained in 70.44 per cent of the tonnage, 2.56 per cent were mixtures of phosphorus and potassium, and the remaining 1.12 per cent consisted of nitrogen and phosphorus or nitrogen and potassium mixtures (***)

Table 59 contains the complete details of the findings of this survey and shows the percentage of each kind of fertilizer of the total of all kinds reported.

Geographic Variations of Relative Importance of Mixed Fertilizers and Fertilizer Materials

There are notable geographic variations in the sales of mixed

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(*) Letter from C. E. Buchanan, Director, Control Division, State Board of Agriculture, to C. W. Bohannan, November 15, 1935. (Copy in NRA Fertilizer Industry Files)

(**) "Commercial Fertilizers", report of the Kansas State Board of Agriculture for the quarter ending March, 1930, p. 23-24.

(***) "A Survey of Fertilizer and Plant Food Consumption in the United States for the Year Ended June 30, 1934", Proceedings of the Eleventh Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1935, pp. 138-203.

fertilizers and fertilizer materials not only as to number of tons but also as to the relative importance of these two classes of fertilizer.

Table 61 presents illustrations from Table 59 on some States which show wide divergence either from the United States average, from one another, or both.

TABLE 59

PERCENTAGE OF EACH KIND OF FERTILIZER OF THE TOTAL OF ALL KINDS REPORTED

State	Complete mixtures	P-K mixtures	All commercial mixtures (1)	Chemical nitrogenous (2)	Organics except bone meal	Super-phosphate (3)	Other available phosphates (4)	Potash salts	Other materials (5)	All materials
New England	78.39	.03	78.54	4.64	3.92	6.17	1.91	2.53	2.29	21 46
Maine	89 03	.....	89.03	3.09	.76	3 09	.48	3.04	.51	10 97
N. H	72.06	.03	72.13	6.50	2.72	6.71	4.70	.82	6.42	27.87
Vt	74 03	.09	74.13	4.48	.57	17.83	.83	.23	1.93	25.87
Mass	69.84	.02	69.87	7.26	4 74	8 92	3.08	1.71	4.42	30.13
R. I	81.41	.05	81.46	5.47	1.47	6.28	2.96	.64	1.72	18.54
Conn	62.09	.08	62.87	4 90	13.40	7.95	3.59	3.73	3.56	37.13
Middle Atlantic	73.68	2.90	76.80	3.69	.73	14 90	1.13	1.10	1.65	23.20
N. Y	76.19	.45	77.10	5.04	.80	14 29	1.23	.44	1.10	22.90
N. J	85.77	.08	86.72	4.49	1.75	2.83	1.99	1 01	1.21	13.28
Pa	71.38	3.11	74.88	2.06	45	18.43	.93	1.00	2.25	25 12
Del	63.56	17.42	81.98	2 02	.14	12 42	.39	2.81	.24	18 02
Md	74.39	6.28	79 29	3 88	.54	11.46	.65	2 20	1.98	20.71
W. Va	49 67	1.44	51.64	5.08	.16	39.37	1.24	.63	1.88	48 36
Southern	71 64	1.75	75 10	11 42	.55	9 19	.29	2.18	1.27	24.90
Va	61 79	3.72	71.16	3.56	.18	17 87	.62	.56	6.05	28 84
N. C	73.50	1 30	77.34	10 87	25	7 21	.07	2 11	2.15	22.66
S. C	73 03	.31	74.64	14 14	36	6 59	.[illegible]	3.97	.28	25.36
Ga	80.51	.47	81.21	12.13	21	4 34	.10	1.91	.10	18.79
Fla	76 11	.93	79 83	7 90	3 88	2 65	1.71	3.77	.26	20.17
Ala	69.58	.58	70 36	15.45	06	12 40	.17	1.53	.03	29 64
Miss	66.37	.....	66 37	20 43	.14	11 31	.02	1.73	.....	33 63
Tenn	45.40	20 98	66 38	4 20	.....	26 69	1.47	.99	.27	33 62
Mo	55 29	1.28	57.78	2 64	.06	34 60	3.60	1.25	.07	42.22
Ark	80 96	.04	81.02	8 80	.13	7 31	.05	2.67	.02	18 98
La	60.28	5 90	66.71	16 27	.92	13 41	1 60	1.08	.01	33 29
Texas	74.61	.07	77.80	4.52	.29	16 16	.03	1 20	.....	22.20
Okla	81.78	.....	81.78	1.34	.....	16 02	.30	.56	.....	18.22
Mid-west	64.87	9.12	74.15	1.92	.22	22.26	.62	.76	.07	25.85
Ohio	63 00	5.72	68.74	1 22	.17	28.57	.71	.51	.08	31.26
Ind	71 74	13.67	85.53	.62	.05	12.26	.23	1.31	.....	14.47
Ill	45.39	20.97	66.61	10.97	2.19	14.21	4.24	1.59	.19	33.39
Ky	49 21	8 95	59.19	1.61	.01	38.71	.31	.08	.09	40.81
Mich	76.79	5.34	82.13	3.40	.28	13.19	.36	.60	.04	17.87
Wis	69.18	13.66	82 85	2.78	.29	11.00	.41	2.60	.07	17.15
Minn	33.27	44.54	77.81	.67	.67	18 66	.66	1.16	.37	22.19
Iowa	37.17	21.39	58.55	1.25	.16	38.90	.33	.79	.02	41.45
Kans	44 73	.....	47.80	1.80	.05	43.41	6.69	.20	.05	52.20
Neb	33 33	.....	33 33	66.67	.....	.....	.....	.....	.....	66 67
S. Dak	90 00	.....	90.00	10.00	.....	.....	.....	.....	.....	10.00
N. Dak	14 43	.....	14 43	.....	.....	85.57	.....	.....	.....	85.57
Western	20.36	.82	22 40	28.82	30.57	6.11	4.21	1.15	6 74	77.60
Idaho	17 24	.....	17.24	75.00	86	.86	1.73	4 31	.....	82.76
Colo	47.25	.....	47 25	42.25	.....	10.00	.....	50	.....	52 75
Ariz	.67	.....	67	38 26	.....	60.40	.67	.....	.....	99 33
N. Mex	.....	.....	.....	3 91	.....	96.09	.....	.....	.....	100.00
Wash	36.59	.....	40.00	20.95	18.21	10.72	5.92	3.17	1.03	60 00
Oregon	37 04	36	38.22	20.71	6.64	12.87	3.38	5.82	10 36	61.78
Calif	16.87	1 00	18.34	30.81	35.14	3.79	4.11	.49	7.32	81.66
Territories	76.14	.....	76.14	22.70	06	1.00	.01	.09	.....	23.86
Puerto Rico	76.14	.....	76.14	22.70	.06	1.00	.01	.09	.....	23.86
United States	70.44	2.56	74.12	9 38	1.57	11.06	.55	1 78	1.52	25.88

(1) The difference between the figures in this column and the sum of those in the preceding two columns is the sum of the percentages of N-P and N-K mixtures.

(2) Includes nitrate of soda, sulphate of ammonia, cyanamid, calcium nitrate, etc. but does not include ammonium phosphate or potassium nitrate.

(3) Includes double superphosphate.

(4) Includes bone meal and ammonium phosphates.

(5) Includes phosphate rock, land plaster, liming materials, peat, magnesium compounds, etc.

TABLE 61

PER CENT OF TOTAL FERTILIZERS REPRESENTED BY MIXED FERTILIZERS AND BY VARIOUS MATERIALS (*)

	Mixed Fertilizer Percentage	Materials			
		Total Materials Percentage	Nitrogen Carriers Percentage	Super phosphates Percentage	Potash Percentage
U. S.	74.12	25.88	10.98	11.08	1.78
N. C.	77.34	22.66	11.02	7.21	2.11
Maine	89.03	10.97	3.85	3.09	3.04
Georgia	81.21	18.29	12.34	14.34	1.91
Mo.	57.78	42.22	2.70	34.6	1.28
Minn.	68.37	32.63	20.57	11.31	1.73
Cal.	18.34	81.68	65.95	3.79	.49

(*) Taken from "A Survey of Fertilizer and Plant Food Consumption in the United States for the Year ended June 30, 1934," Proceedings of the Eleventh Annual Convention of The National Fertilizer Association. The National Fertilizer Association, 1935, Table 9, pp. 192-193.

Tonnage of Fertilizer Materials Sold to Consumers

The remaining 5.28 per cent of the sales consisted of straight fertilizer materials, such as superphosphate, nitrate of soda, ammonium sulphate and potash salts, sold either for direct application as such or for use in homemade mixtures. Table 60 gives the details of the tonnages of fertilizer materials sold in the different states as determined by The National Fertilizer Association survey.

This table shows that the greatest tonnage of any single material was represented by 12 to 16 per cent superphosphate followed in importance by nitrate of soda which is now the chief chemical source of nitrogen for plant food. As has been pointed out in a previous chapter, organic carriers of nitrogen were formerly much more important than they are today.

Tonnage of Plant Food Elements Consumed

It is estimated that in the fertilizer consumed in 1934, there were 503,941 tons of available phosphoric acid, 255,994 tons of nitrogen and 255,099 tons of potash. Of this tonnage of plant food consumed in all fertilizers in 1934, 124,535 tons of available phosphoric acid, 110,906 tons of nitrogen, and 36,026 tons of potash were in materials sold to consumers (*)

(*) "A Survey of Fertilizer and Plant Food Consumption in the United States for the Year ended June 30, 1934", Proceedings of the Eleventh Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1935, pp. 128-203, Appendix II, Exhibit 26, contains a tabulation showing the tonnage of plant food consumed in the year ended June 30,1934 by States as revealed by the survey.

TABLE 60

TONNAGE OF FERTILIZER MATERIALS REPORTED IN THE SURVEY AS SOLD TO CONSUMERS DURING THE YEAR ENDED JUNE 30, 1934

State	Nitrate of soda	Sulphate of ammonia	Other chemical nitrogenous (1)	Dried manures	Tankage	Cotton-seed meal	Other organic ammoniates (2)	Superphosphate 12 P.C.	Superphosphate 16 P.C.	Bone meal	Other available phosphates (3)	Kainit	Muriate of potash	Sulphate of potash	Other potash materials (4)	Liming materials	All other materials (5)	Total
New England	9,735	2,970	3,296	1,942	1,245	4,221	3,679	12,965	2,281	4,247	1,194	7	4,603	1	2,490	6,149	288	60,197
Maine	2,090	1,922	563	177	287		445	949	3,102	223	423		3,891		651	459	220	14,402
N. H.	503	211	209	312	64	1	10	945		645	42		91		25	908	5	3,941
Vt.	131	26	413	61	12			2,241	1	94	47		227		3	247		3,395
Mass.	2,159	742	1,489	853	429	1,042	553	5,309	37	1,638	229	1	683		340	2,633	44	18,225
R. I.	403	77	152	47	111		12	718	8	519	4		68		6	186	19	2,142
Conn.	1,449	990	530	412	232	3,178	2,659	3,805	23	1,220	423	6	343	1	1,456	1,722		17,969
Middle Atlantic	17,690	7,015	3,159	1,967	2,278	99	1,179	99,677	12,312	8,038	4,750	1,459	4,420	2,100	326	6,586	1,924	175,179
N. Y.	5,805	2,986	1,743	782	609	15	228	25,078	2,245	2,192	204	55	753	18	18	2,018	78	44,833
N. J.	4,245	532	514	997	1,311	21	537	2,991	255	2,320	99	119	1,643	24	1	1,213	227	15,656
Pa.	3,294	973	745	360	200	22	347	39,471	5,344	2,210	4,029	199	1,605	1,078	115	1,421	86	61,125
Del.	364	141	71	24	8		5	3,233	23	104	12	358	161	232	4	57	10	4,967
Md.	2,643	2,383	83	127	350	41	152	12,212	1,126	1,006		714	1,144	737	183	1,483	1,010	26,203
W. Va.	1,337	1,083	33	67		10		15,502	2,508	196	406	14	282	6	4	392	513	23,353
Southern	225,350	42,473	31,151	884	1,566	2,918	9,075	104,662	45,982	5,864	1,712	29,311	12,423	3,637	9	609	24,651	8,859	652,388
Va.	8,195	1,876	122	22	26	171	190	29,390	1,609	1,294	133	274	345	44	327	9,717	4,183	68,322
N. C.	63,311	8,372	1,202	11	110	691	876	47,569	602	182	227	5,288	2,090	4,001	1,801	12,498	1,679	152,206
S. C.	44,503	4,035	2,103		133	251	905	21,626	1,983	77		11,294	1,520	845	582	937	29	90,809
Ga.	38,871	11,709	2,330		322	533	67	18,091	595	303	126	5,609	2,012	419	300	399	28	81,395
Fla.	7,523	4,522	6,908	837	680	439	7,031	4,746	1,327	1,013	369	1,304	1,052	29	6,253	324	2,230	40,583
Ala.	16,355	2,210	6,943		7	161	4	34,241	261	56	451	1,493	2,912	53	553	74	75	87,288
Miss.	13,181	7,466	9,003		2	224		2	17,846	26	2	2,068	615		11			53,072
Tenn.	2,907	453	188			1		21,476	1,668	1,241		581	221		50	108	116	28,382
Mo.	132	245	1,102	5	11		2	4,210	4,557	866	27	278	38			1		10,697
Ark.	1,805	939	1		2	37		1,230	884	12		305	132	76	56	2	2	3,485
La.	8,746	2,940	1,307		204	298			8,161	731	220	169	212	164	15		1	20,201
Texas	997	588	150			110			6,144	12	36	296	160		4			8,517
Okla.	18	13							372	7			12					422
Mid-west	33,948	4,742	840	606	250		72	35,904	63,487	2,933	3,783	2	3,478	1	73	187	133	129,642
Ohio	1,110	1,108	22	291	17		3	20,533	29,617	1,259	2,305	2	928		3	147	5	57,111
Ind.	315	273	24	10	34		5	4,412	7,299	331	307		1,292	1	18	6	3	14,282
Ill.	660	121	65	207	53		55	4,442	7,710	625	24		271		13	9	20	14,093
Ky.	610	119	70	4			1	3,462	13,475	201	472		26		12		50	20,508
Mich.	1,591	1,920	542	148	92		5	2,899	8,547	315	294		516		10		42	15,778
Wis.	65	300	50	38	4		1	1	1,414	70	217		288				11	2,358
Minn.	24	22	1	45			2	811	963	45	128		69		12	25		1,547
Iowa	110	26	1	5	1			912	490	12	13		28		1		1	1,531
Kansas		35			1			368	579	137	3		4				1	1,088
Neb.		56																56
S. Dak.		1																1
N. Dak.								205			50							255
Western	2,580	27,136	4,306	23,350	3,606	1,668	7,286	1,322	4,241	1,683	4,828		614	46	493	6,104	1,574	91,324
Mont.		2							225	10							9	21
Wyo.		1																1
Idaho	1	84	2				1		1	2			3					96
Colo.	4	165							15		25				2			211
Utah		1																1
Nev.	20	12																32
Ariz.	150	78							200	4								592
N. Mex.		31							225		27							793
Cal.	1,852	22,986	4,192	22,753	2,302	1,669	6,282	561	1,788	662	4,277		52		467	3,910	682	76,418
Oregon	227	1,858	77	229	5		267	345	371	216	294		288	16	41	90	842	4,609
Wash.	326	2,358	35	366	1,299		718	426	1,071	756	105		369	30	43	164	41	8,509
Territories	15	24,371	450			68		45	1,047		15		51		46			26,108
Puerto Rico	15	24,371	450			68		45	1,047		15		51		46			26,108
United States (6)	285,712	190,706	43,202	29,849	9,053	8,973	21,273	345,645	130,630	22,927	16,286	30,779	25,770	7,785	13,068	43,077	12,376	1,125,249
(7)	29,295	29,204	30,414	1,679	3,670	492	13,439	5,733	29,467	5,174	11,079	1,585	3,617	120	776		816	148,418
(8)	255,008	129,913	73,616	30,449	12,923	9,465	34,714	351,378	151,097	29,001	27,365	32,344	29,387	7,555	13,874	43,077	12,092	1,273,662

(1) Cyanamid, calcium nitrate, urea, etc. not including those that supply more than one plant food.
(2) Fish, castor pomace, dried blood, guano, etc.
(3) Double superphosphate, ammonium phosphates, precipitated bone, basic slag, spent bone black, etc.
(4) Sulphate of potash, nitrate of potash, manapo, sulphate of potash-magnesia, potassium carbonate, ashes, etc.
(5) Phosphate rock, peat, humus, sulphur, zinc sulphate, manganese sulphate, copper sulphate, kieserite, etc.
(6) Total reported in the N. F. A. grade survey.
(7) Additional tonnage reported by officials of Mass., Md., Ala., Miss., Mo., La., Texas, Okla., Ohio, Ind., Ill., Wis., Minn., Kansas and Calif.
(8) Total tonnage definitely accounted for.

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"Principal" plant food elements from the standpoint of application to particular soils for the production of particular crops may mean something quite different. Thus for some soils and for some types of tobacco, phosphoric acid and magnesium give better results than a mixture containing nitrogen, phosphorus and potassium. Continued research on plant food problems, have, especially in recent years, led to the recognition of the importance of still other plant food elements.

Needless Multiplicity Grades of Mixed Fertilizer

There has in the past been an extreme development on the part of manufacturers in putting out different grades. While it is true that for varying crops and varying soil conditions different grades may be and often are desirable, there seems to be no reason to doubt that many of the grades have been developed by manufacturers in an attempt to convince farmers that their fertilizers were different from others and hence theoretically better for the farmer to use without any particular factual basis. Many of the different individual grades vary one from the other only to a very slight extent and often only by the difference of 1 per cent in one of the three principal plant food elements. In the State of Indiana, according to the Report on Commercial Fertilizers, Circular Number 212, Indiana Agricultural Experiment Station, 141 different grades of mixed fertilizers were on sale.

According to The National Fertilizer Association survey (*) there were in the entire United States 1,053 different grades of mixed fertilizers sold in 1934. As can perhaps be expected, in the heavier fertilizer using states, there is a greater multiplicity of grades offered to farmers. Thus, in North Carolina, there were 167 grades on the market; in Georgia, 108; and in South Carolina, 145. Table 62 gives a summary of The National Fertilizer Association report (**) on the grade situation and shows that the sales of the 30 most important grades constituted 75 per cent of the total sales of mixed fertilizers while the other 25 per cent of sales was distributed over some 1,023 different grades. For no one of these 1,023 grades did the total sales amount to as much as 1 per cent of the United States total and the sales of many amounted to considerably less than $\frac{1}{2}$ of 1 per cent. The 16 leading grades accounted for approximately 60 per cent of the entire sales of mixed fertilizer.

(*) "A Survey of Fertilizer and Plant Food Consumption in the United States for the Year Ended June 30, 1934", Proceedings of the Eleventh Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1935.

(**) "A Survey of Fertilizer and Plant Food Consumption in the United States for the Year Ended June 30, 1934", Proceedings of the Eleventh Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1935, p. 143.

TABLE 62

TONNAGE OF PRINCIPAL GRADES OF MIXED FERTILIZERS CONSUMED IN THE UNITED STATES IN THE YEAR ENDED JUNE 30, 1934, AND PERCENT OF TOTAL

Grade	Rank	States using	N-P_2O_5-K_2O basis	NH_3-P_2O_5-K_2O basis*	Total	Percent of total	
						Actual	Cumulative
		number	*tons*	*tons*	*tons*		
3-8-3	1	13	317,276	134,206	451,482	13.99	13.99
4-8-4	2	29	236,369	117,683	354,052	10.97	24.96
3-8-5	3	14	143,084	47,476	190,560	5.90	30.86
2-12-6	4	22	119,033	8	119,041	3.68	34.54
4-8-7	5	20	97,363	186	97,549	3.02	37.56
3-9-3	6	6	564	86,743	87,307	2.71	40.27
2-12-2	7	29	87,028	39	87,067	2.70	42.97
5-7-5	8	9	22,129	60,203	82,332	2.54	45.51
2-9-3	9	10	26,074	50,901	76,975	2.38	47.89
4-10-4	10	16	30,355	44,026	74,381	2.29	50.18
6-6-5	11	13	67,660	48	67,708	2.10	52.28
2-8-5	12	16	66,227	25	66,252	2.05	54.33
5-8-7	13	20	59,279	20	59,299	1.84	56.17
4-12-4	14	36	45,787	9,390	55,177	1.71	57.88
2-8-10	15	22	52,914	587	53,501	1.65	59.53
3-10-3	16	17	46,945	1,922	48,867	1.51	61.04
4-8-10	17	22	46,892	1,029	47,921	1.48	62.52
4-8-5	18	17	41,168	6,279	47,447	1.47	63.99
4-8-6	19	29	28,514	16,878	45,392	1.41	65.40
2-12-4	20	27	43,267	.....	43,267	1.33	66.73
0-10-4	21	12	37,418	.....	37,418	1.16	67.89
2-9-5	22	17	35,861	2	35,863	1.11	69.00
2-10-2	23	21	18,413	15,049	33,462	1.04	70.04
5-8-5	24	20	26,534	4,052	30,586	.95	70.99
3-9-5	25	5	21	29,225	29,246	.91	71.90
4-8-8	26	28	10,932	15,818	26,750	.83	
3-8-6	27	19	25,105	471	25,576	.79	
0-12-5	28	10	23,082	.....	23,082	.72	
5-8-10	29	12	22,326	.....	22,326	.69	
5-10-5	30	32	21,543	178	21,721	.67	75.60
4-7-5	31	4	17,561	2,983	20,544	.64	
2-10-4	32	17	19,379	552	19,931	.62	
2-8-2	33	15	14,875	4,513	19,388	.60	

* In Georgia and South Carolina the grade is stated in the P_2O_5-NH_3-K_2O order, which could not be conveniently used in this table. An 8-3-3 grade for example in these states, as far as the fertilizer itself is concerned, is identical with a 3-8-3 in Florida and Puerto Rico, and the tonnages given here include both.

Exhibit 27 of Appendix II gives a general summary of fertilizer consumption in the year ended June 30, 1934, in relation to grades of mixed goods reported by States.

A single fertilizer manufacturer may make several hundred grades. For example, an executive of a large Baltimore firm stated that while the efforts made to reduce grades during the code period had had none of the desired effects, it is still necessary for them to mix 120 different grades although they feel that this number could well be reduced to about 20. (*)

Efforts to Reduce Number of Grades

Realizing that this great multiplicity of grades was not based on sound manufacturing or merchandising policy and feeling that it added to the cost of manufacture, the industry requested and received approval in its code of the following provision:

> "Article VII - Section 1. In order to eliminate waste and reduce the cost of manufacture, bearing in mind the economic interest of the farmer, a list of grades suitable to meet the agricultural needs of each State, or of each zone, as the case may be, may be established by the producers in such zone or State acting through a zone committee, in cooperation with agronomists and other Federal and State agricultural officials, subject to the approval of the National Recovery Administration. After such grades have been established for such State or zone, the sale or offer for sale therein of mixed fertilizer not conforming to the grades so established shall be considered an unfair trade practice, provided that the sale of special formulas or special ingredients in standard formulas may be made to satisfy bona fide orders from consumers if adequate additional charge is made for mixing costs as determined for the particular plant under the uniform accounting methods prescribed in Article VI plus the extra cost of special materials used; and, provided, that this shall not prevent any producer from selling or offering for sale two extra grades for laws and gardens in various sized packages not to exceed 100 pounds a package."

The original plan was to make this matter of survey of the grade situation and reduction in number of grades mandatory but because of the opposition of certain interests which claimed that this would be discriminatory it was placed on a permissive basis. As is apt to be the case when improvement of trade practices is left on a permissive basis instead of being made mandatory there was some delay by the industry in getting into action on this matter.

(*) Interview of Fertilizer Industry Study personnel with Mr. McQuade of Standard Wholesale Phosphate and Acid Works, Baltimore, September 10, 1935.

However, even prior to the code period some few states, notably Texas, in cooperation with the fertilizer manufacturers had succeeded in bringing about reduction in number of grades sold. That is, concentration on the grades actually needed in the state. In 1934, according to The National Fertilizer Association (*) there were offered for sale in Texas only 37 different grades. According to reports of the Texas Agricultural Experiment Station, in the season of 1925-1926 there were considerably over 100 grades sold but after a series of conferences this was reduced to about two dozen by 1931. In commenting on this matter of number of grades officials of the Texas Agricultural Experiment Station say:

> "The grades of fertiliser sold in Texas are limited in number. This standardization aids the farmer to become familiar with the different kinds of fertilizer, enables him to decide more readily on the proper kind to be used, enables the agricultural worker to make definite recommendations, and reduces the cost of manufacture and handling, thereby also reducing the cost to the consumer." (**)

This same bulletin calls attention to a joint conference of fertilizer manufacturers doing business in the states of Texas, Louisiana, Mississippi, and Arkansas. This was the tenth such conference for Texas manufacturers and the second of the joint conferences. At this conference in conformity with the code provisions above quoted, agreement was entered into as to the grades of mixed fertilizers to be sold in these four states during the 1934-1935 season. In the State of Louisiana the number of grades was reduced from 32 to 23, in Mississippi from 21 to 16 and in Arkansas from 33 to 17 (***).

Official Grades Under the Code

Official lists of grades under the code were also adopted for North Carolina, Maryland, District of Columbia, Delaware, West Virginia and Virginia (****).

In the State of Maryland grades were reduced in number from 134 to 22 (*****), Delaware 65 to 14, West Virginia 66 to 18, and in

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(*) "A Survey of Fertilizer and Plant Food Consumption in the United States for the Year Ended June 30, 1934", Proceedings of the Eleventh Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1935.

(**) Texas Agricultural Experiment Station, Bulletin 498, Nov. 1934.

(***) Ibid.

(****) The Fertilizer Review, November-December, 1934, p. 10.

(*****) Exhibit 28 of Appendix II shows the specific grades adopted by Maryland together with the tonnage of each grade sold in 1934 and the percentage which each grade represented to total sales.

North Carolina from 167 to 29. It should be noted that prior to January 1934 there were 63 other grades on the ammonia basis sold in North Carolina and that if these be counted as separate grades there were at one time 250 grades offered on the North Carolina market. In that state the sale of one grade, namely 3-8-3 used principally on cotton, accounted for 57.30 per cent of the total sales in 1934. It is interesting to note that this grade which was put into the adopted list because of its heavy prior sales was not one recommended by the North Carolina State Agricultural Experiment Station which instead recommends 4-8-4, the sales of which in 1934 reported only 7.21 per cent of total tonnage of mixed fertilizers sold in that state. This naturally raises a very interesting question as to why it has not been possible to get more of the North Carolina farmers to change over to the grade recommended. Part of this may be due to habit and part of it may rest on price differentials.

Brands

The branding of fertilizers developed in the very early stages of the fertilizer industry. The desire on the part of the manufacturer was apparently not only to identify his merchandise in the mind of the farmer but also to develop brand names with reference to certain crops, materials used in the mixture, etc. and hence lead the farmers to believe that they would secure special benefits therefrom, Data is not available on the total number of brands on the market. The following data, however, taken from various State Agricultural Experiment Station Fertilizer Control Reports are indicative of the situation. Thus it is stated that in Kentucky (*) in 1932 there were 719 brands registered, in Vermont (**) in 1934 there were 184 brands and in Massachusetts (***) there were 439 different brands. Brands are used not only on mixed fertilizers but also on fertilizer materials.

Some companies offer the same grade for sale under a variety of brand names even in the same state. Thus in the Spring of 1934 Virginia-Carolina Chemical Company had on the market in North Carolina eight different brands of this grade. These brands of 3-8-3 were exclusive of the special 3-8-3- for use on tobacco (****).

(*) Analyses of Commercial Fertilizer - Kentucky Agricultural Experiment Station Bulletin 336, December 1932, p. 397.

(**) Commercial Fertilizers, Vermont Agricultural Experiment Station, Bulletin 381, July 1934, p. 3.

(***) Inspection of Commercial Fertilizers - Massachusetts Agricultural Experiment Station Bulletin Control Series 74, Nov.1934.

(****) Analyses of Commercial Fertilizers - Spring Season 1934 Bulletin of the North Carolina Department of Agriculture.

Change in Character of Brand Names

Within recent years brand names at least in some states have taken on a somewhat different tone than formerly. This is quite interestingly pointed out by the State of Vermont Agricultural State Experiment Station Bulletin 223 entitled "A Half Century of Fertilizer Control in Vermont". In this report by Dr. J. L. Mills, he states that in the 80's and 90's use was made of such brand names as Standard, Unexcelled, Sure Crop, Gold Brand, Prolific, Sure Catch, etc. and further that frequently the identical grade was sold as a "corn manure" and "potato fertilizer". The trend in brand names is apparently toward less flamboyant descriptions - terms which come closer to being real descriptions of the fertilizers. However, the following are samples of a few which appear to be the other type of brand name taken from the 1934 report of the Board of Fertilizer Control of South Carolina - Good Luck, Old Hickory, Profit Maker, Superlative, Bonanza, and Oversized.

Geographic Variation in Seasonality of Sales

Fertilizers being for the most part applied to the soil just prior to or at planting time, the bulk of the total United States shipments are made in the Spring season. As already noted above about 40 per cent of the fertilizer consumed is used in the Southern States, chiefly on cotton, and on tobacco and truck crops. The planting season for cotton begins earliest in Texas although as noted above Texas is not a heavy user of fertilizer for this crop. The planting season progresses with the advent of Spring and for the cotton belt as a whole, the most active season comes from about the middle of March to the middle or latter part of April.

The National Fertilizer Association has compiled from various State reports sales of tax bags by months. Data on this were presented at the hearing and have been frequently used in other connections by the Association to show the seasonal character of the fertilizer business.

Table 2 presented the Association data on the percentage of fertilizer tax tags sold each month in the thirteen Southern States and cover the four seasons of 1926-27, 1927-28, 1928-29, and 1929-30. This compilation shows that 84.47 per cent of all the tax tags were sold in the first four months with the sales of the other 15.43 per cent distributed throughout the remainder of the year.

Table 63 shows the 1934 percentage which monthly tax tag sales for mixed fertilizer bore to the annual sales in 17 states.

TABLE 63

SALES OF MIXED FERTILIZER TAX TAGS IN SEVENTEEN STATES IN 1934 (*)

Month	Tons	Per Cent
January	363,246	9.5
February	533,146	13.9
March	1,284,149	33.5
April	806,735	21.0
Total, 4 months	2,987,276	77.9
May	180,379	4.7
June	50,797	1.3
July	28,382	0.7
August	103,246	2.7
September	172,457	4.5
October	130,153	3.3
November	87,974	2.3
December	98,206	2.6
Total, 8 months	851,594	22.1
Grand total	3,838,870	100.0

(*) Table adapted from Testimony Relating to the Code of Fair Competition for the Fertilizer Industry, Senate Finance Committee, April 12, 1935, p. 25.

The above data cover the sales of tax tags which necessarily much be bought in advance of the shipment of fertilizers. Apparently there is for the cotton belt as a whole about one month lag between such purchases of tax tags by the producer and actual shipment of fertilizer. However, it should be noted that in practically all states which require the purchase of tax tags, such tags either are good until used or may be exchanged for new tags. Thus as previously pointed out, it might occur that in some years fertilizer manufacturers might purchase a larger number of tags for cotton fertilizers than they would actually need due to a sharp break in the cotton market about planting time.

Per Cent of Sales Each Month in Texas

Table 64 presented data for the State of Texas showing the percentage of tax tags sold and the percentage of fertilizer sold each month of the season for the years 1917-1918 to 1925-1926 inclusive.

TABLE 64

ANNUAL EXPERIENCE FOR STATE OF TEXAS (*)

August 31, 1918 - August 31, 1926

Monthly Percentage of Annual Sales

	Tax Tags	Fertilizer Tonnage
September	6.33	.74
October	2.63	1.37
November	3.00	.92
December	7.15	1.81
January	20.18	12.16
February	23.65	22.25
March	28.29	33.70
April	7.52	21.51
May	.46	2.31
June	.11	.42
July	.18	.28
August	.20	.53

(*) "Fertilizer Statistics for Texas", Texas Agricultural Experiment Station Bulletin 350, April 1927, Tables 5 and 6, pp. 8-9.

From that table it will be noted that whereas 20 per cent of the tax tags were sold in the month of January only 12 per cent of fertilizers were sold in that month. Also while tax tag sales in April amounted to only 7.5 per cent for that month, the sale of fertilizers amounted to 21.5 per cent of the total. In other words the tax tag data would seem to indicate that in that state there is about a month lag in sales as compared to tax tag sales.

Heaviest Missouri Sales in Fall

In some of the other states where fertilizers are chiefly used on crops other than cotton and in states not producing cotton, the seasonality of sales presents a somewhat different picture. Thus in Missouri, the State report (*) indicates that in 1933 the Spring sales of fertilizer amounted to 6,089 tons, while the Fall sales amounted to 20,449 tons. In the grain belt states a considerable proportion of the fertilizer used is in connection with winter wheat which is planted in the Fall. The fertilizer there used consists of superphosphates applied as such or in connection with barnyard manure or special grain grades of mixed fertilizer.

While the above data does throw some light on the seasonality of fertilizer business, there are not at hand such data as would apparently

(*) Registration, Labeling and Inspection of Commercial Fertilizers, 1933, - Missouri Agricultural Experiment Station, Bulletin 333, table 5, p. 29.

give a complete and true picture for each state. The solicitation of business from farmers may take place several months before actual shipments are made. This is, of course, but natural due to the manufacturers' desire to book ahead as many orders as possible. As to the price angle of this situation, it is sufficient to point out here, that in the past it was at least during some seasons, the practice to book such orders at what were in effect tentative prices with the understanding that settlement could be made on the basis of the lowest price in effect during the season.

Factors Influencing the Amounts Sold

In addition to varying needs for different and in fact the same crops on different soils and under different farm management systems, certain other factors are to be recognized as influencing the amount of fertilizer sold, both total and by kinds. To one of these attention was briefly called above, that is, the relation of prices of farm crops and general level of farm purchasing power to tonnage. Other factors are: increased knowledge on the part of farmers as to benefits to be derived from the use of fertilizer, the price of fertilizer, transportation costs especially as affecting geographic differences in sales, and new discoveries as to plant foods and crops, and as to methods of handling soils and methods of applying fertilizers.

Of these various factors, the two which probably have exerted the strongest influence are the first two mentioned, namely, farm purchasing power and the increased knowledge of benefits to be derived from the use ofuse of fertilizer. This, of course, does not minimize the importance of the other factors and naturally the second one mentioned is largely influenced by the new discoveries along the lines mentioned.

Prices of Farm Products and General Purchasing Power

Even a preliminary examination of the total sales of fertilizer by one familiar with the ups and downs of agriculture will reveal to him that years of low farm prices and/or general farm purchasing power are followed by years of decreased tonnage of fertilizer sales and vice versa.

General Relation of Farm Income and Sales of Fertilizer

Table 4 is of interest in showing in a general way the relation between farm income and sales of fertilizer. It shows for each of the years 1909 to 1934 the gross income from farm products and in parallel columns, tons of fertilizer used the next year.

The experience of the last few years is typical of the whole period. The sharp drop in gross income from farm crops in 1930 as compared with 1929 was followed in 1931 by a very sharp drop in tons of fertilizer used. Again in 1931, the drop in gross income was followed in 1932 by a drop in fertilizer consumption. For 1933, the income from farm crops began to pick up and so did the 1934 consumption of fertilizer. A further increase in the income in farm crops in the latter year was followed by a still further increase in fertilizer consumption in 1935.

Income From Cotton and Fertilizer Sales

Since more fertilizer is used on cotton than any other one crop we present Table 65 showing the gross income from cotton and cotton-seed and the tons of fertilizer used on cotton in each year. The story told by this table is quite similar to that showing changed in gross income from farm crops and the total tons of fertilizer used.

TABLE 65

GROSS INCOME FROM COTTON AND COTTONSEED AND TONS OF FERTILIZER USED THE NEXT YEAR ON COTTON

Year	Income from Cotton and Cottonseed(1)	Tonnage of Fertilizer Used on Cotton (2)	Per Cent of Fertilizer Consumption used on Cotton (2)
1928	$1,470,000,000		
1929	1,389,000,000	$2,426,698	30.4
1930	751,000,000	2,403,288	29.6
1931	528,000,000	1,457,383	23.1
1932	464,000,000	866,588	19.8
1933	688,000,000	1,214,284	25.2
1934	723,000,000	1,002,185	18.2
6 year average 1929-34		$1,561,756	25.3

(1) Crops and Markets, U. S. Department of Agriculture, Volume 12, No. 7, July 1935.

(2) "Testimony Relating to the Code of Fair Competition for the Fertilizer Industry", Charles J. Brand, Executive Secretary and Treasurer, The National Fertilizer Association, Extract from Hearings before the Committee on Finance United States Senate, Seventy-Fourth Congress, First Session Pursuant to Senate Resolution 79, United States Government Printing Office, 1935, p. 6.

It is not felt, however, that from the above data one can reason that given a certain known degree of increased or decreased farm prices or farm purchasing power one will have a definitely known increase or decrease in fertilizer purchases the following year. Farmers need to buy other things in addition to fertilizer, and further in some sections, as already pointed out, farmers feel the need of fertilizer much less than do farmers in other sections.

Other Factors Need to be Considered

Examination of more detailed data indicates that there are a number of other factors which must be taken into consideration. For one thing it will be noted from Table 4 that in spite of a decrease in 1932 as compared to 1931, the 1933 consumption of fertilizer was materially higher than in 1932. As there seems to be no basis in the statistical data to explain this increase in fertilizer sales in 1933, it may have been due to the psychological effect of the change in administration and the consequent hope for agricultural relief.

Comparing 1934 and 1929, the question might arise as to whether an advance in farm income from crops to $5,500,000,000 would mean sales the next year of 8,000,000 tons of fertilizer. Examination of more detailed data by years as given in Table 66 indicates that this would not necessarily occur since some years in which the income from crops was practically the same were followed by years in which the tonnage of fertilizer differed quite notably.

Index Numbers of Farm Prices

Table 66 has been prepared so as to show in the left hand column the total amount of fertilizer and fertilizer materials sold each year from 1910 to date. In the column to the right are given for the year next preceding - first, price index number of cotton and cotton seed in the entire year just preceding; second, for December of that year; third, the index for the prices of all farm products; fourth, the index number of prices paid by farmers for all commodities bought including both those for production and household purposes and fifth, the ration existing between prices paid and prices received. Examination of Table 66 shows some interesting things. Cotton and cotton seed have been included in the Table since according to Table 65 about 25 per cent of all the fertilizer sold is used on cotton. Further, for many of the farmers who raise it, cotton constitutes the chief cash crop.

Considering first the index number of prices of cotton for the entire preceding year it is noted that the drop of 12 points in the index of 1912 as compared with 1911 was accompanied by a somewhat decreased use of fertilizer for 1912. A further illustration is seen in the drop in tonnage of fertilizer sold in 1915 of one million and several hundred thousand tons while the cotton price index for 1914 was 12 points lower than it was in 1913. The outstanding illustration is the decreased sales of fertilizer in 1931-1932 as compared to 1930 and also the five year average. In 1930 the index number of the price of cotton was 42 points lower than in 1929, while by 1931 the index number had declined an additional 29 points. In like manner the increase in sales of fertilizer in 1928 and 1929 over 1927 had also been preceded by increases in the price of cotton.

It will be noted that the tonnage sold in 1913 increased over that in 1912 even though the year price index had fallen. This apparent discrepancy may perhaps be explained when one notes the fact that while the year price index did fall the December Price index made a material advance, going from 70 to 97. Also the somewhat decreased tonnage of 1916 did not represent as great a drop from 1915 as one might expect when he notices that the year price index dropped from 85 to 77. Again the explanation is probably found in the sharp rise in the December price index of cotton and cotton seed.

Price Changes not Always Accompanied by Same Change in Fertilizer Tonnage

A further interesting point to notice from comparing tonnage sales of fertilizers and the two price indices for cotton and cotton seed is that a rise or fall in these price indices in one year may not be accompanied by the same degree of change in the fertilizer sales the following year as had occurred at some previous period which had similar annual changes in the price indices. From this and what has been said above concerning changes in the December price index, it may be reasoned that a given price of cotton does not call forth a certain tonnage of fertilizer sales but that the decrease or increase in such sales is rather influenced by what the farmer thinks the cotton market is going to do the following year as indicated in the months of December and January, and perhaps February, when he is probably shaping his

FARM PRICES AND INCOME IN RELATION TO FERTILIZER TONNAGE

Year	Fertilizer		Income from Farm Production the Preceding Year			Prices and Index Numbers the Preceding Year					
	Short Tons Sold (1)	Price Index (2)	Total (4)	From All Crops (4)	From Cotton and Cottonseed (4)	Cotton Price Dec. 1 (3) (Cents per lb.)	Cotton & Cottonseed Price Index Year (3)	Cotton & Cottonseed Price Index Dec. (3)	All Farm Products Index (5)	Index Prices Paid by Farmers (5)	Ratio Prices Received to Prices Paid (5)
			(In Million Dollars)								
1910	5,452,223	99	6,238			13.60					
1911	6,023,541	99	6,643			13.95	113	115	102	98	1.04
1912	5,766,916	100	6,372			9.60	101	70	95	101	.94
1913	6,736,972	102	6,784			11.49	87	97	100	100	1.00
1914	7,099,619	100	6,975			12.50	97	98	101	101	1.00
1915	6,325,262	112	7,028			7.36	85	56	101	100	1.01
1916	5,124,904	120	7,396			11.22	77	99	98	105	.93
1917	5,925,028	137	8,914			17.34	119	160	118	124	.95
1918	6,400,186	170	12,834			27.12	187	237	175	149	1.17
1919	6,625,342	182	15,101			28.93	245	235	202	176	1.15
1920	7,179,754	186	16,935		2,271	35.41	247	291	213	202	1.05
1921	4,762,931	156	13,566		1,272	15.92	248	101	211	201	1.05
1922	5,669,915	129	8,927		760	17.01	101	131	125	152	.82
1923	9,442,314	126	9,944		1,251	22.87	156	195	132	149	.89
1924	9,824,911	120	11,041		1,608	28.69	216	263	142	152	.93
1925	7,335,166	129	11,337	6,179	1,701	22.91	212	177	143	152	.94
1926	7,328,268	126	11,963	6,143	1,740	19.59	177	139	156	157	.99
1927	8,843,199	121	11,480	5,468	1,251	12.47	122	81	145	155	.94
1928	7,985,019	131	11,816	5,817	1,464	20.19	128	153	139	153	.91
1929	7,974,712	130	11,741	5,675	1,470	17.99	152	148	149	155	.96
1930	8,163,257	126	11,941	5,434	1,389	16.79	144	130	146	153	.95
1931	6,306,083	115	9,494	3,818	751	9.46	102	73	126	145	.87
1932	4,373,350	99	6,968	2,746	528	5.66	63	45	87	124	.70
1933	4,808,540	96	8,337	3,995	464	6.52	47	43	65	107	.61
1934	5,532,956	104	6,406	3,032	648	9.72	64	77	70	109	.64
1935	6,200,000	102.5	7,300	3,077	723	12.60	99	109	90	123	.73

(1) Data collected, compiled and published by National Fertilizer Association and based on tax tag sales, state estimates, estimates, etc. Complete footnotes on table.
(2) Bureau of Agricultural Economics, U.S.D.A. - Index number of Prices paid by Farmers for Fertilizer based on reports from dealers.
(3) United States Department of Agriculture Yearbook - 1935
(4) U. S. Department of Agriculture "Gross Farm Income" - Crops and Markets, July 1935, p. 270, "Income from Crops".
(5) "The Agricultural Situation", Bureau of Agricultural Economics, Vol. 19, No. 11, Nov. 1, 1935, page 21.

his cotton production plans for the coming season. In other words, it is not a matter of so many cents increase in cotton but probably the general feeling on the part of cotton farmers that better times in general are ahead for cotton farmers that leads to increased purchases of fertilizer.

Prices Paid by Farmers Also Important

As in the cases of index number for price of cotton and cotton seed so with the rise and fall in the index number of the combined prices of all farm products, a decided increase or decrease in one year is generally accompanied by a change in the amount of fertilizer purchased the following year. In considering this whole problem attention must be given to the index number of prices paid by farmers for all commodities and the ratio of prices paid to prices received. Naturally, if the price of cotton and cotton seed and other farm products show marked increases, and the prices of commodities which farmers customarily purchase rise still more rapidly, the farmers' total purchasing power is depressed instead of enhanced.

Distribution Channels and Methods

As noted above, the annual movement of fertilizer amounts to around 6,000,000 tons distributed to some 2,225,000 farmers. Each state contains some of these customers although the market is more highly concentrated in some areas. Further it was seen that there has been a gradual expansion of the market into Western States and that this movement is apt to continue and in fact accelerate. The great bulk of the total United States tonnage is sold in the first few months of the year. The geographic seasonal variations are of course influenced by the variations in the crops raised.

Factors in or Affecting the Methods of Distribution

Engaged in the distribution of these large quantities of fertilizer to these millions of customers are a great many individuals, firms and groups. These include the manufacturers and mixers themselves and various types and kinds of distributors (brokers, wholesalers, agents, dealers, retail stores); salesmen on salary and/or commission; and a special type farmers cooperatives; as well as numerous contributory agencies or services such as transportation, communication, credit and the like. Distribution of fertilizer both as to kind, quantity and channels is also influenced by various government and state agencies (especially the latter) through their educational, regulatory and advisory services. Of especial significance here is the work of the state agricultural experiment stations and agricultural extension forces and state fertilizer legislation and control.

Status of Data on Distribution Channels and Methods

There have been no recent studies made either descriptive or analytical of the distribution of fertilizers either by government or private agencies. Thus it is impossible to set forth in as much detail for fertilizers as it would be for numerous other kinds of commodities

the kinds and types of distributors, the volume of sales moving through each type, the number of employees, operating expenses, methods of operation, etc. For example, there are no data which were secured by the Census of Distribution comparable to those for either the wholesale or retail sales in such lines as groceries, boots and shoes, furniture, clothing, dairy products, grain, etc.

The most recent government studies are those of the Federal Trade Commission issued in 1916(*) and 1923(**). These two reports were no doubt of great value when written and will repay careful reading by anyone interested in the fertilizer industry in its public relations prior to the boom and depression years. In fact they are drawn on to a certain extent as indicated in this and other chapters of this report. However, since a considerable number of years have elapsed which have been years of many new developments and changes, the usefulness of these reports for present purposes are decidedly limited.

There are also some fragmentary data in some other government reports and some of the state reports - but no comprehensive and detailed studies such as government agencies have made in the case of a number of other commodities. Nor did the first Census of Distribution taken in 1930 (which did produce some exceedingly worthwhile data and resulted in some very good reports on distribution of some other commodities) make any real contribution to the knowledge of distribution of fertilizer because of its well defined limitations which are discussed latter.

Channels of Distribution

From the available data and general knowledge of the Industry, it can safely be stated that at least prior to the Code the fertilizer manufacturers and mixers probably used every known method of making sales and probably also used and/or developed for their use every conceivable type of distribution channel.

At the time of the codification of the industry its products were moving to its final customers through at least the following channels:

direct from manufacturer (factory or mixer) to farmer;
from manufacturer to dealer (retail) to farmer;
manufacturer to local farmer cooperatives to farmer;
from manufacturer to wholesale cooperative to local cooperative to farmer;
to wholesale to retail dealer to farmer.

(*) 1916 - Report of Fertilizer Industry, Federal Trade Commission submitted in response to Senate Resolution No. 487, Sixty-Second Congress, Third Session, August 19, 1916.

(**) 1923 - Fertilizer Industry, Federal Trade Commission submitted in response to Senate Resolution No. 307, Sixty-Seventh Congress, Second Session, March 3, 1923.

In addition to the above channels, there was also some volume moving through agents of various types. In some sections of the United States, it was customary for a manufacturer to designate as an agent a farmer who made some sales to his neighbors thus enabling him to purchase fertilizer for his own use at a discount. On the other hand, there were company agents on salary or commission. During the life of the code, some extremely interesting points developed in connection with this matter of agents which are discussed in greater length in a later section.

Percentage of Sales Through Different Channels

According to Chart I, at the time the code was submitted there had ordinarily moved 20 per cent direct from manufacturers to farmers; 10 per cent to or through cooperatives; 70 per cent to dealers with wide variations in these percentages in different sections of the country.

The data on percentage of sales through various channels secured by the Census of Manufacturers in 1930 for the year of 1929 at the request of the Census of Distribution show the following:

15.7 per cent of total sales made to wholesalers with 179 plants using this channel (32 of them exclusively); 104 plants distributed through their own wholesale branches, the total sales so moving, being 10.1 per cent of total fertilizer sales and 27 manufacturers were reported as using this method exclusively. The data on sales to retailers show 219 plants selling to retailers and the total sales to retailers for the year was 32.1 per cent of the total dollar value distributed by all plants. Seventy plants reported selling through manufacturers' agents, brokers and commission houses and 27 of these reported that all of their sales were so made. (*)

Unfortunately the data secured on sales direct to farmers were not so reported that they could be tabulated and shown separately but such sales for purposes of publication were included under the caption "Sales to Industrial and Other Large Consumers" and hence throws no light on this point.

In considering these Census data it should be kept in mind that the "Channels of Distribution Inquiry" was set up in uniform fashion for all the industries and may have not been the most significant from the standpoint of the fertilizer industry. Further these data cover sales made by manufacturers to other manufacturers and/or mixers who in turn sell to farmers either direct of through various channels. Thus all that can be done here is to discuss the channels and methods of distribution of fertilizer to the extent made possible by general knowledge of the industry from such partial data as are available from various sources.

Mixers probably sell more direct to consumers than do manufacturers. The Census data make no differentiation as between "manufacturers" and "mixers". Especially in the Southern States there are quite a number of these mixers who while members of the Fertilizer Industry and covered by

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(*) Distribution of Sales of Manufacturing Plants, 15th Census of the United States (1932), Table 1, pp. 32-33.

the Census of Manufacturers do not actually have manufacturing plants. Their operations consist in purchasing the various ingredients, nitrogen carriers, superphosphate, potash salts and the like and mixing them into some grade of fertilizer such as 3-8-3 or 4-8-4. In some instances they sell these materials to the farmers for direct application or home mixing. Materials may be bought either bagged or in bulk and bagged by the mixer before sale to the farmers.

In one sense these mixers are probably to be considered rather a special type of wholesaler or retailer than as manufacturers. It is probable that they sell a much larger percentage of their total output direct to farmers than do the complete manufacturing plants. However, the mixer also makes some sales to or through retailers and agents.

From the above data, it will be seen that the fertilizer business is an industry in which the producing members perform the wholesale and retail functions in the distribution of their product to a much greater extent than is true in the case of numerous other lines of production.

Number of Wholesale and Retail Distributors

Fragmentary data are available as to the number of wholesale and retail distributors of fertilizers. The Census of Distribution (*) taken in 1930 and covering the year of 1929 reports 279 wholesalers of fertilizer and fertilizer materials with total sales of $187,469,687. Of these sales approximately $3,500,000 were made direct to consumers and approximately $56,500,000 to industrial consumers. The latter term would cover sales made through some type of wholesaler to manufacturers and mixers. The census report further states that these 279 wholesalers included 92 wholesale merchants, 85 manufacturers' sales agents, 35 manufacturers agents and 19 brokers as well as a number of commercial merchants, sales agents, and other miscellaneous types.

In considering the above data it must be kept in mind that the Census classification as to kind of business was on a 50-50 basis, so that there would be classified as wholesale fertilizer dealers only those firms whose schedules show that at least 50 per cent of their total sales volume was in fertilizer. Even for those definitely classified as fertilizer wholesalers, it is not probably that their total sales volume is made up exclusively of fertilizer. Fertilizer is also commonly handled on a wholesale basis by firms which also handle feed and/or other farm supplies, but there is no way of ascertaining from the Census data what part of their total sales consisted of fertilizers. The Census of Distribution was necessarily taken on the "kinds of business" basis rather than on the commodity basis. This fact plus the fact that in connection with the retail trade, the Census of Distribution used schedules for all retailers in incorporated places of less than 10,000 population, which made no provision for securing sales by commodities, made it impossible for the Census of Distribution to show any satisfactory amount of data on the number of retail dealers selling fertilizers or on the volume of their business. In fact even in cities of over 10,000 population the schedules used for stores doing less than $60,000 would

(*) Fifteenth Census-Distribution, Vol. II, Wholesale Distribution, Table 3, p. 76.

not show commodity break down. As a result of the above limitations the Census of Distribution shows only 1,213 stores with sales of approximately $21,500,000 which were classified as fertilizer dealers (*). In other words, that many stores which reported that at least 50 per cent of their sales consisted of fertilizer.

It is a well known fact that there are numerous other kinds of stores, especially in the smaller places, which sell fertilizers. Among these are hardware stores, farm implement stores, feed and seed stores, general merchandise stores and general stores. Since there are several hundred thousand of these kinds of stores throughout the farming regions there would seem to be no dearth of available retail outlets for the fertilizer producers who desire to sell through them.

Other Information as to Types of Distributors

Under the rules and regulations for open price filing set up by the Fertilizer Recovery Committee there was included one requiring companies to list their dealers and agents according to the following categories:

Merchant agent
Farmer agent
Cooperative agent
Merchant dealer
Farmer dealer
Cooperative dealer

In a letter to members of the industry urging compliance with this ruleing(**). Mr. Brand states that up to that time he had received listings covering 40,000 agents and dealers. He further states that a previous listing totalled 56,000 agents and dealers but does not give this date of this prior listing.

Leaning of Dealers and Agents

Distinction between dealer and agent apparently is not quite clear cut in this Industry. The usual distinction as between dealer and agent apparently did not always apply in the fertilizer industry.

This in discussing the status of dealer and agent in 1923 the Federal Trade Commission says:

"In selling to dealers the custom is now to use the consignment

(*) Fifteenth Census, Distribution, Volume I, Retail Distribution, Part I, Table 14, p. 49.

(**) Letter from the Code Authority to producers, March 28, 1934. (Copy in N.R.A. Fertilizer Industry Files)

form of contract which appears to be one of agency."(*)

Codal Definitions

The N. R. A. Code for the fertilizer industry defined "dealer" and "agent" as follows:

"Sec. 8. The term 'dealer' means any person, other than a producer, engaged in the business of buying mixed fertilizer, superphosphate, and/or other fertilizer material for the purpose of selling at a profit. One buying for his own use, or principally for his own use and that of his tenants, shall not be deemed to be a dealer. A group of unincorporated consumer buyers acting collectively or through an individual for the purpose of contracting for a joint order is not a dealer.

"Sec. 9. The term 'agent' means any person engaged in the business of distributing mixed fertilizer, superphosphate, and/or other fertilizer materials for a fixed compensation as provided in the producer's price list, and who guarantees the whole and complete performance of the terms of his contract with the producer."(**)

Shift from Dealer to Agent During the Code

Since the dealer takes title to the fertilizer, he usually sells to his customers on such terms and conditions as to price as he may determine. The dealer was exempted from filing prices under the open price/provisions of the code. Under these conditions, when the industry, after operating for a few months under the code, decided to quote prices on a "delivered to the farm" instead of an "f.o.b. factory basis" there was a concerted effort to change from a dealer to an agency basis so as to keep title and control the consumer price. That the industry was successful in accomplishing this was indicated by Mr. Brand, who stated that during the period of codal operation the industry had very largely changed over to an agent rather than a dealer basis.(***)

Cost of Dealer versus Agent Distribution

In an address before the Association Mr. Brand stated that in the days before N. R. A.

"It was our most common custom to sell on a dealer basis and to make dealer contracts with those merchants or other buyers who

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(*) Fertilizer Industry, 1923, Federal Trade Commission Report to the Senate, p. 36.

(**) Article II, Sec. 8 and 9, Codes of Fair Competition, Volume II, p. 124.

(***) Conference with Mr. Al F. O'Donnell, Unit. Chief, Fertilizer Industry Study, October 25, 1935.

purchased for resale, who were possessed of adequate cash or good credit. Then we customarily made agency arrangements with a fringe of distributors who were lacking in cash or were of doubtful credit, and to these we shipped our goods under consignment arrangements designed to impose upon them as many of the responsibilities of ownership of the consigned goods as possible but still retaining title for the purpose of protecting our accounts.(*)

The logical inference would be that it was cheaper to do business on a dealer basis and that the change to an agency basis would ultimately cost the industry money which would in the long run be passed on to the consumer in the form of higher prices.

Practically speaking such evidence as is available would not support this contention. It seems that the change to an agency basis was not more than a nominal one. The physical channel of distribution remained the same. Mr. Brand indicates that in Alabama, which stayed largely on the dealer basis, the Industry had the most trouble with price cutting.(**)

It is interesting to note that it is this very State which remained on a dealer basis which is always selected by The National Fertilizer Association to prove that the small and medium volume producers benefitted more than the large producers in increasing their tonnage under the Code. No figures are available to indicate the relative profits on such increased tonnage.(***)

FARMERS AS AGENTS OR DEALERS

The practice of giving agents' or dealers' discounts to farmers buying in large quantities, some of which they may or may not have sold to their neighbors, apparently led to serious difficulties prior to the Code. On this point Mr. Brand, speaking of the pre-code days said:

"We gave dealer prices and terms to consumers able to buy in carlot quantities, with the effect of a constant tendency to crumble all prices to the relatively low level extended to our best dealers, namely those possessed of ample cash and good credit."(****)

(*) "Our Industry under the Code", by Charles J. Brand, Proceedings of the National Fertilizer Association Convention, 1935, p. 24.

(**) Ibid, p. 31.

(***) Charles J. Brand, Testimony before the Senate Committee on Finance, Seventy-Fourth Congress, First Session, Pursuant to Senate Resolution 79, Government Printing Office, p. 24.

(****)"Our Industry under the Code", Proceedings of the Eleventh Annual Convention of the National Fertilizer Association, The National Fertilizer Association, 1935, p. 24.

However, it must not be reasoned from the above statements concerning change from dealer to agent basis that the industry was altogether without problems on this point during the code. In fact, there is evidence that the matter of proper interpretation of the codal definition of an agent was at times one of the most serious problems which confronted the industry in its codal operation. It would appear that at times some producers classified as agents, farmers who themselves consumed 90 per cent or more of the fertilizer sent them in their alleged capacity as agents.

On this difficult problem of consumers qualifying as agents, the code authority itself does not seem to have been at all consistent in its interpretations. Thus, in the N.F.A. letter of August 14, 1934, in the definition of Article II of the Code, Mr. Brand says that "one who buys fertilizer solely for his own use cannot qualify as an agent" and again on the third of April, Mr. Brand says that "a producer cannot make an agency contract with a cooperative which is entirely made up of members of an incorporated farm".

However, on March 19, 1935, in response to inquiry from Senator Smith and the NRA, Mr. Brand states "the Average consumer in South Carolina is usually a large one. Provision has been made to care for such buyers by enabling them to become agents and enjoy the discounts provided for agents". From this correspondence concerning the South Carolina situation, it would appear that in March 1935 Mr. Brand did not feel that he could be as strict with the members of the industry as in August, 1934.

Administrative Order No. 67-36, October 24, 1934, was an approval of the request of the code authority to require producers to report, when officially requested to do so, the names of all agents to whom they sold fertilizer materials or mixed fertilizers. This request was made by the code authority in order to assist in determining which producer was supplying an agent with fertilizer and who had been charged with price cutting.

Certain correspondence between Assistant Deputy Administrator Battley and Administration Member Baxter also throws light on the situation(*). For example, Major Baxtor on August 30, writing to Captain Battley approving the idea of the listing of dealers and agents says "The question of the functions of an agent in the Fertilizer Industry is one which is quite serious." and in an earlier letter, August 6, said that the chief difficulty in arriving at a satisfactory definition was the fact that the members of the industry themselves could not agree as to how agent should be defined. Captain Battley, in writing Major Baxter under date of September 15, 1934, is discussing this problem said "There seems but one way of solving the problems, namely, an amendment to the code." The industry was consistent in its policy not to reopen the code for amendment and this agency problem remained a serious one as long as the code existed.

(*) Copies of these letters are available in the NRA Fertilizer Industry Files.

Company Salesmen on Commission Prohibited

Prior to the code, it had been customary for members of the industry to employ salesmen both on salary and on commission. Section 2, Article VII, of the code, "Marketing Provisions," prohibited the employing of salesmen on a commission basis in the following language:

> "No traveling salesman shall be employed on a commission basis for the sale of mixed fertilizer, superphosphate, and/or other fertilizer material. Such sales shall be made only through regular, legitimate, salaried salesmen working under the control of the producer. This section shall not apply to the State of Florida."

The reason for prohibiting the use of salesmen on commission basis apparently was that difficulty had been experienced in preventing such salesmen from splitting commissions with their customers thereby threatening the stability of the price structure.

At the Public Hearing the arguments against commission traveling salesmen were summarized by Mr. C. F. Burroughs, President of the F. S. Royster Guano Company, as follows:

> " - - - that a commission salesman is difficult to control; he sometimes represents several lines; he may be in the employ, on a salary basis, of a concern, and handle fertilizer as a side line; he is prone to split his commission with substantial customers with or without the knowledge of the producer paying his commission in the following manner---while goods are invoiced at the going market and paid for as billed, and apparently everything is regular, later on the commission traveling salesmen makes a private settlement with his customer, thus avoiding as far as the seller is concerned, the charge of secret rebating and yet obtaining the business for his principle at a net cost price."(*)

On the other hand Mr. Penniman of the Standard Wholesale Phosphate and Acid Works of Baltimore, spoke in opposition to this section of the code saying that his company considered "that the very essence of successful selling of goods is selling them through men who are on a commission basis---but men, of course, who are under control."(**)

It is interesting to note that according to Section 2, the State of Florida was exempted from those provisions so that producers selling in that State might employ traveling salesmen on commission.

By terms of Section 8, Article VII, subsections a and b, the following states were also exempted: Idaho, Utah, Montana, Colorado, Wyoming and Nebraska. The reason for the exemption in the case of these Western States is to be found in the fact that they use such small quantities of fertilizers and that a producer could not afford to employ salesmen for that territory on any other than a commission basis.

(*) Transcript of Public Hearing on Code of Fair Competition for the Fertilizer Industry, September 6, 1933, pp. 212-213.
(**) Ibid, pp. 166

Attempt to Limit the Number of Salesmen

While it was not adopted in the final code, the attempt to limit the number of salesmen which a company could employ should be mentioned as indicative of the extent to which some members of the Industry wished to go in regulating the industry's business practices. The draft of the code under date of July 18, 1933, contained the following provision:

> "Multiplicity of Salesmen Prohibited".
> "In order to eliminate excessive sales cost, the use by any producer of mixed fertilizer and/or fertilizer material of an unreasonable number of salesmen for marketing his said products is hereby prohibited."(*)

The appendix of this draft of the code contains proposed basis for deciding this matter as follows:

> "The following indicates the basis of annual tonnage and territory to be covered by each salesman:

	Tons	and/or cover not less than
a. New England	1,500	5 counties
b. Middle Atlantic	3,000	10 counties
c. Southeast		
Virginia	3,000	10 counties
North Carolina	6,000	10 counties
South Carolina	5,000	10 counties
Georgia	4,000	10 counties
d. Gulf Section		
Alabama	5,000	10 counties
Mississippi	4,000	10 counties
Tennessee	3,000	10 counties
e. Southwest	2,500	10 counties
f. Middle West	2,500	15 counties"(**)

This provision was also contained in several subsequent drafts but had disappeared by August 19 and certain notes on a conference held on August 15 indicate that it was removed at the suggestion of the Deputy Administrator who stated that it was out of line with recognized unfair trade practice provisions and that he would not recommend it for approval.(***)

Prohibiting of Sales Through Brokers

Prior to the code, it had been customary for some sales to be made through brokers. According to the code there was put into effect a prohibition against making sales through brokers of mixed fertilizers and/or bagges superphosphate to dealers or consumers. This is contained in section 4, article VII, "marketing provisions," which reads as follows:

(*) Volume A, Draft of Code dated July 18, 1933, p. 4,
(**) Volume A, Draft of Code dated July 18, 1933, appendix.
(***)(These notes are in the NRA Fertilizer Industry Files)

"The sale by the producer of mixed fertilizer and/or bagged superphosphate to the dealer or consumer through brokers is hereby prohibited."

It was alleged at the Public Hearing that because the fertilizer manufacturers make contact with the consumer very directly and that the industry wanted to prevent the possibility of brokers entering the distribution channel (*). It is probably that the industry wished to close the possibility of brokers being appointed solely as a subterfuge for price cutting.

Farmers' Cooperatives

The data presented on Chart I by The National Fertilizer Association at the hearing stated that 10 per cent of total fertilizer sales were handled by cooperatives, but this varies from State to State. Thus in those states where the large scale cooperatives are active they are quite important factors, for example, the Grange League Federation in New York, the Farm Bureau Wholesale Services in Ohio, and likewise in Indiana, Illinois, Michigan, and Alabama.

In fact, so important did the industry regard cooperatives as being that they incorporated in their code a special provision entitled "Distribution through Cooperative Associations."

This provision is found in section 3, article VII, marketing provisions, and reads as follows:

"a. Any arrangement upon sale, consignment, or agency basis between producers and regularly incorporated farmers' organizations engaged in the various activities common to such organizations and principally engaged in a bona fide wholesale business or their divisions or departments granting special rates, commissions, or concessions, or the divisions of profits, may be continued, entered into, and performed, provided that such sales are not below the producer's price as provided in Article VI, Section 1 of this Code, and that it shall be obligatory upon such cooperative organizations to maintain the producer's schedule of prices to their dealers and consumer in areas covered.

"b. No provisions of this Code shall be interpreted as preventing farmers' cooperative corporations from paying patronage dividends as authorized by law."

This section has thus two important provisions (1) that fertilizer producers could sell to cooperatives on any terms they chose as long as such prices were not below producers' cost, although even then they could meet existing competition, (2) that the cooperative while having to maintain price schedules to dealers and consumers could include fertilizer purchases in calculating patronage dividends accruing

(*) J. Ross Hanahan, President, Planters Fertilizer and Phosphate Company, Charleston, S. C. Transcript of Public Hearing on the Fertilizer Code, September 6, 1933, p. 240.

to their members. This special cooperative provision and the fact that the code authority had in its membership from the start one representative of the cooperatives and later a second cooperative member, are in themselves indicative of the importance of the cooperative in the distribution of fertilizers.

Cooperatives Under the Code

As the code went to the hearing the provision on cooperatives contained the words "state wide" but on the showing of Mr. Chester Gray, American Farm Bureau Federation, and of certain others these words were eliminated. The reason was that it was clearly demonstrated that numerous cooperatives were actively engaged in the handling of fertilizers which although quite important were less than state wide in their scope, for example, Washington County, Missouri and Merrimack County, New Hampshire.

Executive Orders in re Cooperatives

This whole question of the treatment of and preservation of the rights of cooperatives under the various codes including this one were subject to much dispute frequently accompanied by bitter feeling. In an attempt to clarify the situation there were issued two Executive Orders, No. 6355 (October 23, 1933) and No. 6606-A (February 17, 1934) and Administrative Order No. X-35 (May 18, 1934).(*) The first of these, No. 6355 was issued for the purpose of specifically providing that none of the provisions of the codes of fair competition under the NIRA which were designed to limit or prohibit payment of allowances, rebates, refunds, etc. should so operate as to prevent "the payment of patronage dividends in accordance with law to any member of any bona fide or legitimate cooperative organization". It should further provide that these cooperatives must be duly organized under the laws of any state, territory, or the District of Columbia of the United States and such patronage dividends must be paid out of actual earnings and not paid at the time the member made his purchases. The basis for this Order is, of course, to be found in the nature of the cooperatives which are not set up as profit making enterprises but in order to effect savings for the members. Such savings, if any, over and above the cost of merchandise, operation, etc. after making due allowances for revisions, etc. are returned to the members in the form of patronage dividends in proportion to the total amount purchased by each member.

5 Executive Order 6606-A, issued February 17, 1934, supplemented and amplified Order 6355 and the Order stated that it was issued because "questions have arisen concering the scope and meaning of Executive Order 5355."

This Order states that no provision of the many codes of fair competition or any agreement or license pursuant to Title I of NIRA "shall be construed or applied so as to make it a violation of any code of fair competition to sell to or through any bona fide and legitimate cooperative organization including any farmer cooperative."

(*) These Executive Orders are included in Appendix II as Exhibits 29, 30, and 31 respectively

This Order also reaffirms the former order to the effect that no code will be allowed to prevent cooperative organizations from receiving or distributing to its members as patronage dividends or otherwise the proceeds or benefits directly or indirectly derived from any discount, commission, rebate or dividend". The order also authorized the Administrator for Industrial Recovery to determine after such hearings and proceedings as deemed necessary whether an organization is or is not a bona fide and legitimate cooperative entitled to the benefits and protection of this order.

Difficulties of Qualifying as a Cooperative

In spite of the special provisions in the code and the two Executive Orders and the Administrative Order above mentioned it would seem that some cooperatives experienced difficulty in securing, or qualifying for, the benefits which they felt the said sections in the Executive and Administrative Orders were intended to provide for them.

Thus the Executive Director of the Code Authority ruled that cooperatives to qualify under the Special Marketing Provision must sell at least 50 percent of their total volume to dealers or member cooperatives. That is, he ruled that a cooperative, no matter what the volume of their fertilizer business, could not recieve the benefits of this marketing provision if they dealt directly with the individual farmer members. He further ruled that cooperatives to quality under this provision must handle other farm supplies and states in N.F.A. News for February 2, 1934 "the various activities common to such organizations referred to in this section are the sale of the general line of supplies to farmers through local cooperatives and/or dealers". However, the section in question, section 3 of article 7, does not so state; the language being "incorporated farmers organizations engaged in the various activities common to such organizations and principally engaged in bona fide wholesale business".

Sales to Cooperatives by Producers and Importers Exempted from Open Price Filing Provisions

Under date of April 10, 1934, General Johnson issued Administrative Order 67-3 which was of considerable significance to cooperatives. The Order asserted the right of any wholesale cooperative as described in the code to purchase such materials as potash, phosphate rock, and/or nitrogen carriers from producers or importers even though these latter had not filed schedules of prices to dealers and consumers. At the same time it became incumbent upon the cooperatives to themselves file and maintain open price schedules. In other words, this Order gave producers and importers of fertilizer materials the right to sell to cooperatives without having to file prices to dealers and consumers which act would have made them liable to the code. Prior to the issuance of this Administrative Order there had been received numerous complaints from farmer organizations that they could no longer buy these products directly from importers and producers but had in all cases to purchase them through fertilizer producers at consequently higher prices.

Reaction of Producers to Cooperative Provision

In some cases cooperatives, which probably were clearly in the meaning of the code and the various Executive and Administrative Orders, had difficulty in securing for themselves and members of the benefits of these special provisions.

As illustrative of the first point, Major Baxter, Administration Member, in a letter to Deputy Administrator Battley, under date of August 27, 1934, reporting on a trip to Chicago to attend an Executive Committee Meeting, made a report on cooperatives, especially the State Farm Bureaus. Major Baxter had conferred with managers of the Michigan and Ohio State Farm Bureaus, also members of the Tennessee Corporation, one of their principal suppliers of fertilizer and materials, and also representatives of the Smith Fertilizer Company of Columbus, Ohio. This latter company under date of September 5, 1933 submitted a letter to the NRA very bitterly complaining of what they alleged to be unfair discrimination in favor of cooperatives, claiming among other things that cooperatives were in effect brokers and hence prohibited by the code and stating that special concessions to the cooperatives were in violation of fair trade practice provisions and in addition stating that farmer organizations did not pay state dealers taxes, or license fees. In this Mr. Smith overlooked entirely the fact that farmers after all do pay a good many taxes which are not paid by manufacturers and dealers. The special provision in the code and the cooperatives had representatives on the code authority is evidence that not all producers opposed cooperatives.

Cooperatives Improved Position under the Code

In the Baxter letter above referred to he says "producers are alarmed over the inroads made in their business by the exempted cooperatives", He states the essentials of a contract with the Tennessee Corporation which gives Farm Bureau discount similar to dealers- 9 per cent discount on small shipments; 12 per cent on 100 tons or more; and also 5 per cent allowance for office expenses and general sales expenses; further that if sales under the contract showed the producer a gross of over 3 per cent for expenses, additional profits were to be divided between producer and cooperative and that the cooperatives held and exercised a right of auditing producers' books. In Baxter's opinion, this provision would allow an additional 1 or 2 per cent to the Farm Bureau.

With reference to Ohio, Major Baxter says that principal fertilizers there sold by the Farm Bureau for $30 per ton with 12 per cent or $3.60 off in the 100 tons lots minus an additional 5 per cent or $1.50 for overhead. Baxter says that it was estimated that all of this $1.50 did actually go for overhead and he figured that this would leave the $3.60 (12 per cent discount) minus a 60 cents commission paid by cooperatives to their agent or a net of $3.00 to be covered into the cooperative patronage dividend fund. In making this statement Major Baxter apparently was not familiar with methods of operation of well-organized cooperatives as they do not actually pay out all net profits as patronage dividends but first make certain deductions for reserves and the like.

Major Baxter says that the manager of the two State Farm Bureaus informed him that they had increased their business 50 percent over the previous season and anticipated a similar increase for the next year, that is 1935.

If these two farm bureaus did increase their sales by approximately 50 per cent, it is interesting to note that the total sales of fertilizer in Ohio increased 26.39 per cent in 1934 over 1933 and in Indiana 52.8 per cent. However, it should also be noted from Table 5 that the Smith Agricultural Chemical Corporation, Columbus, Ohio, the chief critic of the cooperatives showed a net profit before interest and dividends in 1934 of $114,414 as compared to $54,178 in 1933, an increase of $60,236 or approximately 111 per cent.

Major Baxter also in the same letter stated that some producers were trying to organize cooperatives among farmers so that they could sell on the same basis as other producers were selling to Farm Bureaus. Major Baxter stated that in his opinion this would lead to competition between cooperatives and would be accompanied by a rise in distribution costs as a larger percentage of the total tonnage moved through these channels so that the cost of distribution through cooperatives might in the long run be no cheaper than other methods.

Transportation as a Factor in the Distribution of Fertilizers

The fact that much fertilizer and fertilizer materials moves in interstate commerce and that about 25 per cent of the cost of the product when it reaches the consumer's hands is represented by transportation costs has been discussed in Chapter I.

Table 67 shows the results of a survey made by The National Fertilizer Association in 1933 covering outbound shipments by fertilizer manufacturers. This study shows a considerable decrease in the percentage of the total shipments which were made by rail, a very material increase in shipments made by trucks while the shipments by water remained practically constant.

TABLE 67

SUMMARY OF OUTBOUND SHIPMENTS BY FERTILIZER MANUFACTURERS ACCORDING TO GEOGRAPHIC SECTIONS AND PERCENTAGE MOVING BY VARIOUS TYPES OF TRANSPORTATION (*)

		All Rail Per Cent	Water and Rail Per Cent	All Water Per Cent	Trucks Per Cent	Rail and/or Water and Trucks Per Cent
New England	1931	63.3	6.2	24.0	6.0	0.5
	1932	56.3	5.7	20.9	15.9	1.2
	1933*	36.1	1.3	29.2	32.8	0.6
Middle Atlantic	1931	70.0	2.5	9.9	16.3	1.3
	1932	53.4	3.0	9.3	32.7	1.6
	1933*	31.8	2.9	15.6	45.8	3.9
South Atlantic	1931	85.3	0.1	2.8	11.8	0.0
	1932	85.1	0.0	1.4	13.5	0.0
	1933*	69.4	0.0	1.7	28.8	0.1
South Central & Southwest	1931	92.3	3.1	0.1	4.5	0.0
	1932	80.2	3.7	5.0	11.1	0.0
	1933*	71.6	1.2	1.6	25.6	0.0
Mid-West	1931	89.1	0.0	0.1	10.8	0.0
	1932	75.0	0.1	0.1	24.8	0.0
	1933*	65.3	0.3	0.1	34.3	0.0
All Sections	1931	83.2	1.3	4.5	10.8	0.2
	1932	75.3	1.5	4.8	18.0	0.4
	1933*	63.2	0.7	4.6	31.0	0.5

* 10 Months Only

(*): Adapted from Table II, Exhibit J of Code Application, "Special Survey of Inbound and Outbound Fertilizer Shipments for the Three Seasons 1931, 1932, and 1933," The National Fertilizer Association, May 13, 1933, p. 6. (Copy available in NRA files)

Interstate Movement

Ample evidence of interstate shipments of fertilizers sold to farmers will be found in the various state fertilizer reports and which give the location of the fertilizer plants selling within various states. Typical illustrations show that of the various plants selling fertilizer in Mississippi, 24 are located within the State and 27 are outside of the State, while in the case of Missouri, of the total of 35 fertilizer producers selling in that State only 11 are located in the State and 24 outside. Of the 70 fertilizer producers selling fertilizer in the

State of Maine 55 plants are located outside of the State of which 8 are Canadian and one is a Dutch concern (*).

Government and State Agencies and their Influence on Distribution of Fertilizer

Government Agencies

The most important government agency from the standpoint of its influence on the kind, quality and amounts of fertilizers distributed is the United States Department of Agriculture. Through its experimental and educational or advisory services, this Department has exerted a real influence in bettering the position of the farmer in his purchase and use of fertilizers.

State Agencies

The principal state agencies of interest here are the State Agricultural Colleges and experiment stations, the State Departments of Agriculture and state legislation. Practically every state in the Union has important legislation affecting the sales of fertilizers including provision for guarantee on the part of the manufacturer, as well as the frequent analyzing of samples which may be done at the request of any farmer. Chart XI gives a summary of state fertilizer control laws, regulations and rulings as of September 1, 1935. These state laws vary in some essential respects, but they have, by and large, had an extremely helpful effect in seeing to it that the farmer is protected in his purchase of fertilizers. The various state agricultural colleges and experiment stations have also rendered service of incalculable value both to the farmer and to the members of the Industry through their research and teaching work in connection with the proper use of fertilizer materials.

Credit as a Factor in the Distribution of Fertilizers

Credit from various sources plays an important part in the distribution of fertilizers not only in connection with credit purchases by farmers but also in connection with the financial needs of the members of the industry. However, since credit terms are quite intimately connected with the matter of prices the discussion of credit is written up later in this Chapter in connection with the discussion of prices.

Conclusions on the System of Distributing Fertilizers

As already noted there are not available sufficiently detailed data

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(*) Report of Analyses of Commercial Fertilizers and Fertilizer Materials, Seasons 1932-1933, State Department of Agriculture, Jackson, Miss., pp. 24-27

Registration, Labeling, and Inspection of Commercial Fertilizers; University of Missouri, Agricultural Experiment Station Bulletin 348, April 1935, pp. 11 and 24

Commercial Fertilizers, 1933, Maine Agricultural Experiment Station, Orono, Maine, October 1933, p. 96.

on the system of distributing fertilizers (methods and costs) to make possible a scientific appraisal as to the degree of economic soundness or unsoundness now existing. However there is ample evidence that many of the practices as regards sales methods, prices, discounts and credits have been economically unsound.

Further evidence of what may be considered an uneconomical aspect of the system of distribution is seen in the following. There are distributed annually approximately 6,000,000 tons of fertilizer. Chart I indicates that 70 per cent of the total, or about 4,200,000 tons are distributed by some 50,000 agents and dealers, which is equivalent to annual sales per agent or dealer of only 84 tons. Thus the gross income from fertilizer commissions of such a dealer or agent would be from $100 to $200.

That such a large number of small market outlets is disadvantageous to the industry is well recognized in the following statement:

> "Too many dealers are trying to sell fertilizer. Every fertilizer manufacturer wants a dealer in every town. But the manufacturer would be better off, in my opinion, and the dealer would be better off, if the manufacturer had fewer but exclusive agents. For all of them could then do enough business to justify their putting into the business more time and more service to the farmer."(*)

Distributive Relations just Prior to National Recovery Administration

At the time of code submission it is not too much to say the industry was in a distressed condition. As described in detail in Chapter I it had suffered a severe slump of sales partly at least due to the sharp decline in farm income. This had been accompanied as in previous periods of stress in the industry with cutting of prices. The industry may be said to have been on a strictly price competitive basis with widespread indulgence in various maneuvers such as special inducements, special agency contracts, free goods, etc. in an attempt to stay in the market and hold customers pending the return of more nearly normal conditions.

The National Fertilizer Association, which has done much to straighten out the industry and to improve its trade practices, was finding that much of this work was being negatived. It, no doubt, welcomed the opportunity to come under a code which it probably believed would accomplish at least some of the things aimed at in previous voluntary attempts.

(*) "Change and Cooperation", by L. W. Rowell, Vice President, Swift & Company and President of the National Fertilizer Association, Proceedings of the Sixth Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1929-30, p. 12-13.

CHART XJ

SUMMARY OF STATE FERTILIZER CONTROL LAWS, REGULATIONS, AND RULINGS
(as of [illegible])
PREPARED BY THE NATIONAL FERTILIZER ASSOCIATION
Washington, D. C.

[illegible]

Perhaps the best way to set forth the shortcomings of the methods of distribution as the industry itself saw them is to summarize the provisions the industry accepted in its code. Attention is also directed to some proposed provisions which were not incorporated in the approved code (*).

Code Provisions Affecting Distribution

Price cutting was aimed at through the open price filing systems, prohibition against the sales below cost and several of the fair trade practice provisions, and general marketing methods through Article VII - Marketing Provisions, and Article VIII - Unfair Trade Practices. Some other articles contain provisions which also had an effect on distribution, especially Article II - Definitions - Section 1 - as will be pointed out later.

Article VI - Price Provisions - contained two sections (1) prohibiting sales by any producer below his cost except to meet competition (2) providing for the filing of open price schedules which were not effective until the lapse of 10 days time and requiring also that copies of schedules be mailed or otherwise delivered to all competitors simultaneously with transmission to the Association.

Article VII - Marketing Provisions - Section 2 prohibited sales through commission traveling salesmen and provided that "sales shall be made only through regular legitimate salaried salesmen working under the control of producer". Section 4 prohibited sales through brokers.

Six states, Idaho, Utah, Montana, Colorado, Wyoming and Nebraska were exempted from all rules pertaining to sales. The reason for exempting sales in these Western States, from code sales provisions was that there was not enough fertilizer business in those States to justify employing salaried salesmen or restricting competitive methods of increasing sales. The six States exempted from all marketing provisions ordinarily consumed less than 1 per cent of the total fertilizer sold in the United States.

There are two other sections in this Article which throw some light on the problems of the industry as seen by members of the industry, namely, Section 1 making permissive a reduction in number of grades offered for sale in the various states and Section 3 covering distribution through cooperative associations.

Article VIII, prohibiting certain allegedly unfair trade practices, gives a pretty good idea as to what the industry felt was wrong with their system of distribution especially in relation to prices. It is, of course, recognized that in addition to these things which the industry decided to prohibit there may have been other disadvantages in the system of distribution which were more apparent from the customers' standpoint than from that of the industry.

(*) Code of Fair Competition for the Fertilizer Industry is in "Codes of Fair Competition," National Recovery Administration, Volume II, 1933, p. 117-136.

There are some other factors, the development of which may cause a decrease both in the tonnage of fertilizers and in that of plant food consumed in certain sections notably the Old Cotton States.

Effect of the A.A.A. Program

One of these factors is the effect of the A.A.A. cotton acreage reduction program. It is still too early to be able to determine the long-run effect of this program on the various aspects of southern agriculture or on the fertilizer business in that area. It may not however, be amiss to raise certain points at this time.

On the one hand, Mr. Brand of The National Fertilizer Association who was at one time co-administrator of the A.A.A. has repeatedly pointed out that in his opinion the A.A.A. program has increased the prosperity of the cotton farmer of the Old South and has made it possible for him to purchase more fertilizers.

There is, of course, the other side of the story, namely that increased price of American cotton due to the A.A.A. program is driving it out of foreign markets and is encouraging other cotton countries to increase their acreage. This increased foreign production of cotton will mean increased future competition for the United States cotton in foreign markets. Either the cotton acreage and production in this country will have to be still further reduced, hence requiring less fertilizer or else we shall have a trend toward the very cheapest possible cost of production. It is not clear whether the answer to the latter point would be cotton on fewer acres with more fertilizer or cotton on more acres with less fertilizer.

Mechanical Cotton Pickers

If any of the various attempts at developing mechanical cotton pickers should work out practically, that in itself would very materially reduce the cost of making the crop so that farmers in, say, Alabama, Mississippi and Georgia might perhaps use more fertilizer. Thus it is stated that in the Mississippi Delta region mechanical pickers and strippers would make possible a 75 per cent reduction in operating labor. However, it has at least in the past been predicted that perfection of mechanical cotton pickers would cause a large increase in the production of cotton in certain sections of Texas where, as already noted, fertilizers are not commonly used to any appreciable extent, and where the limiting factor has probably been the lack of a sufficient supply of cheap labor at picking time.

Shift in Crop Acreage

Another interesting slant on this problem is contained in the recent releases of the Bureau of the Census of Agriculture taken in 1935 covering the year 1934. In general these show in the Old South a very decided decrease in cotton acreage which has been largely taken up in increased acreage of food stuffs and food crops, accompanied by substantial increases in livestock. Thus in North Carolina there was an increase of 900,000 acres in corn and hay; 150,000 acres more wheat; 217,000 more cattle and 103,000 more hogs. For Alabama, the release

shows 1,000,000 acres more corn; 450,000 more acres of hay and 440,000 more cattle (*).

Since one of the reasons for the use of less fertilizer in some Mid-West States is to be found in the mixed character of the farming, including the carrying of more livestock and hence the availability of a much larger quantity of farm manure, it may be reasonable to expect a somewhat similar development in these Southern States if the present shift to general farming becomes permanent. It is, of course, recognized that if this increase in corn and livestock becomes permanent in the South, it may cause some of the Mid-West States to make such shifts in their farming practices as to add crops on which it will pay them to use fertilizers.

Summary of Future Distribution Volume

In view of the present changing trends in American agriculture, the future of the distribution of fertilizer is very difficult to predict, but barring rather far reaching developments one way or the other, it would seem reasonable to expect a slow, but fairly constant increase in the trend in tonnage of plant foods used on American farms. This, of course, does not necessarily mean that these plant foods will be obtained from the same sources as at present. Industrial chemists are still busy as they have been in the past and the immediate future may see some further changes.

PRICES

THE SIGNIFICANCE OF PRICE

The whole system of production and distribution of fertilizer is, set up to get a price and, if possible, a price which will show a net profit over and above cost. Thus to the manufacturer price is of extreme importance. To the farmer, the price of fertilizer means the cost of one of his most essential and most expensive production items. To the laborer in the factory, the price which the fertilizer manufacturer can secure may be the difference of having a job or not having one, and the price differential over and above cost of materials may be the difference between poor and good wages. To the consumer of agricultural products either in the original or converted form, as well as to all students of our economic situation, the price of fertilizer is significant as being one of the factors influencing the degree to which farmers can make the most efficient use of their crop lands.

FACTORS AFFECTING THE FARMER'S PRICE OF FERTILIZER

The farmer in buying fertilizer finds himself in the same position he does in the purchase of most supplies - that is, he finds he must pay the price asked by the manufacturer and/or distributor. This, of course, does not mean that the price asked is necessarily too high nor that the manufacturer or distributor can ask and secure any price he desires. In fact, it may not always be possible for a seller of fertilizer to secure a price high enough to reimburse him for all of his cost - to say nothing

(*) Farm Census, Preliminary Reports, Bureau of the Census, Department of Commerce, 1935.

of always securing a profit.

However, disregarding the necessity of price cuts to move merchandise under peculiar conditions, it may be said that the manufacturer's cost is one of the most important elements in the price of fertilizer to the farmer. Other factors influencing prices are: the cost of distribution, transportation, and credit; the general price level; the level of farm prices, and purchasing power of farmers, etc.

Cost of Manufacture as a Price Element

Cost of manufacture does not necessarily set a minimum base for price, but it certainly has a tendency in that direction. In The Fertilizer Industry according to published data of the National Fertilizer Association (*) prices have at times been cut to below total plant cost. However, plant cost must be taken into consideration in connection with prices.

Cost of Raw Materials the Chief Element in Factory Cost.

Pre Codal Period

In the total cost of manufacture of mixed fertilizer by far the most important element is the cost of the materials. Thus data on cost of making 4-8-4 in the Southern States issued in 1929 (**) shows that for 12 plantw the total factory cost exclusive of interest on investment was $21.29. Of this amount the average cost of material (basis port plants) represented 81 per cent while other cost factors were as follows: Factory labor 5 per cent and all other factory cost including bags, twine, power, taxes, etc. represented 14 per cent.

1929 data for other sections of the United States presents a similar picture, thus in New England material represented 65.7 per cent in cost of making 5-8-7 and in the Middle West materials represented 77 per cent of the cost of making 2-12-6.

In the case of superphosphate a study made by The National Fertilizer Association (***) showed that here too the materials formed by far the largest share of factory costs. Thus in the Middle and South Atlantic States materials represented 83 per cent of the total cost; in three Southeastern States, 81 per cent; and in four South Central States, 78 per cent.

Materials Cost During the Code

Cost studies made during the code (****) showed that in the Spring of 1933 materials represented 63.1 per cent of total cost at the plant

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(*) National Fertilizer Review, January-February-March 1934, p. 1. The National Fertilizer Association; and numerous publications and statements. See also Table 53 of this Report on Costs and Sales Prices in 1933.

(**) Comparison of costs of mixed fertilizers, The National Fertilizer Association, 1929.

(***) Comparison of cost of superphosphate, 1929 to 1930, The National Fertilizer Association, October, 1931.

(****) "A General Report on Mixed Fertilizer Costs and Sales Prices, Spring Seasons of 1933 and 1934 in the Principal Fertilizer Consuming Area in the United States," The National Fertilizer Association, October 26, 1934. Appendix II, Exhibit 20.

and in 1934, 62.3 per cent (*)

The above examples are sufficient to show the great importance of the cost of materials to the manufacturer and the part it plays in determining the price at which he can afford to sell. They are for the same reasons equally important to farmers and the students of the economic conditions of agriculture since developments bringing about an increase or decrease in the prices of these materials are usually, other things being equal, accompanied by an increase or decrease in the price of fertilizers to farmers. In the case of materials that the farmer buys for home mixing or direct application the relationship is still closer. The price history of these materials has been reviewed in Chapter II.

Cost of Distribution

The available data are very meager on the cost of distribution as an element in the retail price to the farmer. The items which probably should be included under this general caption are manufacturers' selling expenses, cost of transportation, and the discounts or commission allowed to the various kinds and types of distributors.

As a general rule manufacturers at interior points are nearer the markets and have lower costs of distribution but a compensating factor is the higher cost of raw materials as contrasted to port cities where the lower cost of raw materials is offset by higher cost of distribution.

The National Fertilizer Association Studies of Distribution Costs

As to manufacturers' selling expenses, a study (**) made by The National Fertilizer Association showed that for the year ending July 31, 1930 selling expenses in various sections of the country were as shown in the following summary:

Middle Western States - 2-12-6 - Total Cost $26.74
Selling Expense $2.27

South Central States -4-10-4 - Total Cost $27.56
Selling Expense $1.31

South Eastern States - 4-8-4 - Total Cost $22.79
Selling Expense $1.53

South Atlantic States - 4-8-4 - Total Cost $23.23
Selling Expense $1.12

New England States - 5-8-7 - Total Cost $35.62
Selling Expense $3.13

(*) A Digest of the Cost Accounting Manual prepared for use in Administering the Fertilizer Code is contained in the Fertilizer Industry NRA Archives as Exhibit D. See also Exhibit 21, Appendix II which explains the cost accounting system.

(**) Comparison of Costs of Mixed Fertilizers, 1929-1930, The National Fertilizer Association, September, 1931.

A later report (*) gives a general summary of what is referred to as "Average Cost of Distribution". Here the total is given as $4.69 per ton including average freight -$2.39, average trucking from railroad station to farm -74 cents, average agent's compensation -$1.56. It should be noted that this average cost of distribution does not include the manufacturer's selling expenses.

Such "selling expenses" are unfortunately not separately set forth in the survey. If available there could be calculated the average cost of distribution. However, such "averages" are not very satisfactory for such an item as cost of distribution of fertilizer. That is the generic term "fertilizer" covers so many different kinds that to get a true picture there should be available cost of distribution data for at least the principal grades and by geographic divisions. With reference to the latter point, the transportation costs vary considerably at the present time. The total cost of distribution varies for a given grade of fertilizer from such States as North Carolina on one hand and Nebraska and Kansas on the other hand since in the latter States the farmers are a much further distance from the fertilizer factories. It is felt that such data as are needed to present a true picture of cost of distribution could be obtained only through a detailed study.

Vial's Study of Cost of Distribution

A different approach to cost of distribution is presented in a study(**) published at Cornell University. The author of the bulletin E. E. Vial publishes data which he refers to as cost of distribution for certain fertilizer over a period of years. Analysis of his discussion, however, (page 4) reveals that these are not really "cost of distribution" but cover the entire spread between the market quotations of the materials and such retail prices as he was able to secure for various states. In other words his data include transportation of material to factory, plant costs (other than for materials) such as labor, bagging, manufacturers' selling expenses, transportation to dealer and farm, etc. Vial himself points out these limitations on page 4 but states "for the farmer, however, the difference between the difference of prices in wholesale market and the price which he pays in his local community represents the cost of distribution". Later in his report, on page 153, he discusses these data as if they did cover the actual cost of distribution.

It should be noted that most quotations on materials do not necessarily represent what the fertilizer manufacturers actually had to pay for them. Further the retail prices as used in the Cornell report are taken from certain state reports which are chiefly concerned with chemical

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(*) Mixed Fertilizer Costs and Sales Prices, Spring season of 1933 and 1934 in the principal fertilizer consuming areas in the United States, Fertilizer Recovery Committee, 1934.

(**) Retail Prices of Fertilizer Materials and Mixed Fertilizers, Cornell University Agricultural Experiment Station, Bulletin 445, 1932.

analysis and control of fertilizers and which include retail price data merely as indicating trends. It is felt that such prices do not necessarily indicate what farmers actually paid for fertilizer. For example, there is no way of determining whether the prices for various years are on a comparable basis nor do the data as published show whether the prices shown are "time basis" or "cash basis" or whether they do or do not include various discounts such as quantity, seasonal and the like. While the Cornell data might possibly be of some value as indicating in a general way the relation between market quotations or materials and retail prices, it is not felt that in such a report as the present one their so-called "cost of distribution" data can be used as such.

Conclusions on Cost of Distribution.

Even in the absence of detailed cost of distribution data there would seem to be prima facie evidence of economic unsoundness in the system of distribution of a large share of the total tonnage. The annual average tonnage is approximately 6,000,000 tons. According to the Association data 70 per cent of the total or 4,200,000 tons is sold by dealers and agents of which the Association says there are approximately 50,000. This means average annual sales per agent and/or dealer of some 84 tons.

Credit as a Factor in the Distribution and Prices of Fertilizer

General Importance of Credit

Credit, including the need for, availability of, cost from various sources, has been of vital importance in the distribution and prices of fertilizer. For the purposes of this chapter the points of special interest are the farmers' purchases of fertilizer on a credit basis, kinds and sources of credit, credit availability for this purpose, and the cost, both absolute and relative, of credit from these various sources. Of interest also are the credit terms of sales as they existed prior to the Code, the Code provisions, and experiences in attempting to operate under it.

Annual Survey of Fertilizer Credit

In the annual survey of credit in the Fertilizer Industry made by the Division of Farm Finance, the Bureau of Agricultural Economics, certain data are published which indicate at least in a general way the importance of credit in this Industry. This survey is conducted in cooperation with The National Fertilizer Association. The 1934 survey (*) covered 97 manufacturers who had in 1934 sales amounting to $48,000,000. They estimated that their 1935 sales in 25 states would be 16 per cent on a credit basis which was identical with their 1934 experience. Of these 97 firms, 34 reported that they did not expect to use credit from banks, 26 reported they expected to use bank credit to about the same extent as in 1934, while for the entire group it is expected that bank credit for 1935 will exceed bank credit for 1934 by 6 per cent.

At the same time, these manufacturers estimated that farmers in 1935 bought 29 per cent of their fertilizer on credit as compared with 36 per cent in 1934. It should be noted these percentages refer to tonnage and the percentage of farmers using credit in the purchase of fertilizer may be something quite different and probably considerably higher since farmers purchasing larger tonnage may not have needed credit to the same extent as the smaller farmers. It is also interesting to note that both actual 1934 percentage and the forecast of percentage for 1935 are materially lower than the 1933 figures issued in November of that year which showed that during the year 35 per cent of the farmers' purchases of fertilizer were on credit basis.

An interesting question here is whether this reflects a better cash position of the farmers or an increased availability of credit through other sources such as banks or crop production loan associations, the securing of which make it possible for farmers to pay cash for their fertilizers and avail themselves of cash discounts offered by fertilizer manufacturers.

(*) Bureau of Agricultural Economics, Department of Agriculture, Division of Farm Finance, Mimeographed Report November, 1934.

Similar points of interest arise in connection with the statement that, in 1933, 1,641 fertilizer dealers required credit as against 939 in 1934 but here the question is whether this was due to the better cash position of farmers or whether it may not have been principally due to elimination of or reduction in the number of dealers through the efforts of manufacturers during the credit period to increase their sales through agents. There seems to be some evidence that this was probably accomplished at least to a certain degree in some states.

Farm Credit Very Important Problem

The whole problem of the farmers' use of credit in obtaining farm supplies as well as household supplies is an extremely important and interesting one with many ramifications. The purchase of fertilizers on credit is, of course, but one phase of this larger problem. Because of the significance of this problem a considerable amount of work has been done on it in the past by the Bureau of Agricultural Economics, United States Department of Agriculture and by some of the state agricultural experiment stations and more recently by the Farm Credit Administration.

Fertilizer Credit in North Carolina

In 1930 there was published a study on "Farm Credit in North Carolina - its cost, risk and management." (*) This bulletin presents data covering several groups of farms in the State of North Caroline for the year 1926. For the group of farms studied the purchases of fertilizer account for 46 per cent of the total short term credit obtained in 1926. The bulletin states

> "The total expenditure for this item often exceeds the farmers' available funds and is most often the factor which causes the North Carolina farmer to seek credit."

Since credit for the purchase of fertilizer originally runs for a relatively long term, generally 7 months, as in the case of cotton, banks have not been so willing to carry the burden. Only one-third of the fertilizer credit in 1926 was on the basis of cash loans, the other two-thirds being extended by merchants and generally at a higher charge. According to the same bulletin cash credit costs these farmers on the average of 7.7 per cent while merchant credit on the average costs them 25 per cent. It is also interesting to note that credit from stores costs on the average of 28.5 per cent, while credit from fertilizer companies costs 22.7 per cent. Merchant credit was often obtained on a flat charge basis. That is, merchandise having a cash price of $100 would have added to it a flat time charge of 10 per cent of the balance or a total of $110. Thus, if the account ran only 6 months the rate would really be 20 per cent per annum. On the other hand if the account

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(*) Bulletin No. 270, North Carolina State Agricultural Experiment Station.

ran for 18 months per annum the rate would be 6 2/3 per cent. This fact may account for the general slowness of some farmers in settling up such merchant credits since overdue accounts would be cheaper than those paid promptly when due.

Cost of Fertilizer Credit Relatively High

There are some extremely interesting comments on costs of fertilizer credit, contained in a summary (*) on the cost and term of short term credit according to purpose. It shows that fertilizer credit on the average costs these farmers 25.4 per cent as contrasted with 11.8 per cent for other farm expenses and 20.8 per cent for living expenses. It further shows that the cost of merchant credit for fertilizer was 35.2 per cent whereas the cash credit for fertilizer cost but 8.8 per cent and the cost of merchant credit for fertilizer was much higher than that for other farm expenses - 23 per cent. It would appear that at least at that time, 1926, merchants customarily charged more for credit sales of fertilizer than they did for credit sales of other commodities. On this point the authors of the bulletins make the following pertinent comments:

> "The cost of fertilizer credit further tends to be generally higher than for other purposes because the flat rates carried are distinctly higher than flat rates for most other goods sold on time. Merchants usually reported their time charges for general supplies at 10 to 15 per cent, and occasionally at 20 per cent, increase of cash rates, whereas time charges for fertilizer were generally 20 to 30 per cent above cash. This policy of differentiating rates on sales by the two methods is set by the fertilizer companies in selling to dealers and carried out in retail sales."

> "The significance of this variation in credit cost for the farmer is that he should use what cash he has or can borrow to buy this fertilizer and, in so far as he finds it necessary to use credit bearing a flat charge, to use it for those purposes which have longest term and so result in lowest per annum cost."

Note: A similar report for the State of South Carolina (**) gives data and conclusions quite similar to those for North Carolina.

(*) Bulletin No. 270, North Carolina, Agricultural Experiment Station, Table 13, p. 26.

(**) Agricultural Finance in South Carolina, South Carolina Agricultural Experiment Station, Bulletin 382, November 1931.

Credit Conditions in the Industry just Prior to the Code

The terms and methods of handling credit sales in the Industry just prior to the code, at least on the part of some companies, left much to be desired as indicated by Mr. Brand and others, and by code provisions thereon in Article VIII - Unfair Practices. Thus we find that in Section 8 it was felt necessary to prohibit waiving the obligation to be paid in cash before documents or goods are delivered in connection with S.D.B.L. sales and also the practice of waiving earned interest. Further, subsection (b) of Section 11 prohibits the carrying as delinquent balances due by solvent customer with no intention of requiring ultimate payment. Section 12 prohibits certain devices which had been resorted to in connection with what were apparently cash sales and in fact making them credit sales. These methods apparently were making sales covered by sight draft and bill of lading and then the producer who made the sale endorsed negotiable instruments which enabled the purchaser to obtain the cash to meet the S.D.B.L. The other method was similar in that the producer rendered himself responsible to the bank although not actually endorsing the obligation.

Ruinous Credit Practices

Mr. Brand in the 1932 convention of The National Fertilizer Association in talking about the ups and downs of agriculture and discussing the problems of the Industry mentioned ten problems of essential importance and two of these were as follows: "ruinous credit policies" and "a vicious practice of deferred settlements." In this connection Mr. Brand referred to his address to the convention in June of 1927 entitled "For Better or for Worse - Our Industry." Since it was in this address that he originally mentioned the two problems quoted above, it would seem that the situation had not materially improved in the time which had lapsed from 1927 to just prior to the code.

The Code of Fair Practices of the Fertilizer Industry, adopted January 10, 1927 prohibited "extended credit terms that do not take into account the actual costs of money or credit," and also required that in the case of delivery against promissory notes the accounts should be made payable at the time the crop was marketed.

The Trade Practice Conference Rules of December 1929, approved by the Federal Trade Commission, contain provisions quite similar to those in the adopted NRA code. Thus, section (d) of Rule 2 of the 1929 trade rules was almost identical with Section 8 of Article VIII of the Code, and section (h) of Rule 2 of the 1929 Trade Practice Rules was practically identical with Section 12 of Article VIII. In the proposed plan for a voluntary code submitted to the Federal Trade Commission in October 1935 these same matters are covered in almost identical words. (*)

At the 1935 convention, Mr. Brand, in speaking on pre-codal conditions of the Fertilizer Industry, said:

(*) A copy of this Voluntary Agreement is contained in Appendix II as Exhibit 32.

"Because of our genuine and proper desire to sell as large a quantity as possible for cash, it was our custom to have an extraordinarily wide spread between cash and time prices that often resulted in criticism of the industry, much of it unwarranted and based upon misinformation.

"We pursued credit policies that commonly resulted, in years of diminished agricultural income, in a burden of bad debts and uncollected accounts that imposed unfairly upon the frugal and prudent farmer who paid his bills. We often pursued a loose fallacious credit policy intended to reduce unit overhead costs by obtaining larger tonnages over which to distribute such costs, with the result that frequently we garnered in bad debts far in excess of any saving made in overhead." (*)

Typical Cash Discounts

The experience with cash discounts in South Caroline is typical. During the first few months the usual schedule of discounts was as follows:

10 per cent for cash
9 per cent for payment within 30 days of invoice
8 per cent for payment within 60 days of invoice
Note required, bearing interest at 8 per cent, if payment was not made within 60 days of invoice.

After January 1, 1934, cash discounts were increased and put on a basis of named dates instead of a given number of days after invoice. The typical schedule effective during the first six months of 1934 was:

8 per cent interest was paid on deposits in advance of purchase
15 per cent discount for payment before March 15
14 per cent discount for payment before April 15
13 per cent discount for payment before May 15
12 per cent discount for payment before June 30
No discount after June 30 and an 8 per cent note required
1 per cent additional discount allowed on cash price for payments at or before delivery.

Unscientific Credit Practice

During the operation of the code, the industry continued to offer an abnormally high discount for cash often in order to shift the banking function from the shoulders of the Industry. Keen competition, however, seems to have presented a scientific application of the idea and large discounts of as much as 12 per cent were allowed for cash payments within four months after delivery. Typically these discounts decreased from 15 per cent to only 1 per cent per month for four months whereas to accomplish the purpose of shifting the credit burden from the Industry these discounts might have been decreased much more sharply as time elapsed from the delivery date. The policy used by the Industry tends to shift the desirable credit risks and keep the poorer ones.

(*) "Our Industry under the Code," Charles J. Brand, Proceedings of the Eleventh Annual Convention of The National Fertilizer Association, The National Fertilizer Association, 1935, p. 24-25.

After four months the discounts ceased and a legal rate of interest was charged in addition. In spite of these deterrents nearly 30 per cent of the sales of the industry during the code were made on a credit basis. This fact should be borne in mind in considering cost studies which show the amount received by the manufacturers as a cash price. Unless the excessive competition forced the extension of credit unwisely the industry must have made money on its banking function as 15 per cent discount plus 6 to 8 per cent interest is certainly more than the money was worth to any well financed fertilizer company.

That fertilizer companies had been accustomed to a banking profit is evidenced from the following quotation:

> "The sale of fertilizer at cash prices means that from now on we must rely more on a manufacturer's profit and realize that what might be termed a banker's profit resulting from interest received on time sales, will be largely missing." (*)

In this connection it is interesting to observe that the cost study referred to in Table 53 shows that the manufacturer in 1933 received at the plant $1.52 per ton less than the fertilizer cost him according to the standard cost accounting formula. If we could apply such losses to the entire 5,522,956 tons of fertilizer sold in 1933 it would indicate losses for the industry of $8,410,093 in that year. The income tax returns in Table 6 on $95,205,621 gross sales (Census shows $82,811,000 sales for the industry) showed a net deficit of only $2,474,256 thus illustrating the fallaciousness of computing the profits or losses of the industry from such a cost study of prices received by the manufacturer at the plant.

Wholesale Prices

Table 68 gives an indication of the way in which the wholesale prices of typical grades of complete fertilizer have varied over a period of years.

(*) Annual address of the president, by Spencer L. Carter, Proceedings of Third Annual Convention of The National Fertilizer Association, The National Fertilizer Association, June 7, 1927, p. 10.

TABLE 68

WHOLESALE PRICES OF TYPICAL GRADES OF COMPLETE FERTILIZER (*)

Year	3-8-3 South, price per ton	5-8-7 (Northeast), price per ton	2-12-2 (Middle West), price per ton	per Cent of 1919 price (average)
1919	$55.68	$94.25	$49.93	100
1925	22.80	41.34	28.10	46
1927	19.00	28.09	25.41	36
1929	22.40	34.15	26.19	41
1931	19.13	31.36	21.90	36
1933	14.77	24.29	19.10	29
1934	17.35	26.26	20.36	32

Retail Prices

The industry conditions of price cutting in the pre-codal period have made it impossible to construct an accurate index of prices paid by the farmers for fertilizer either before the Code or since the Schechter decision.

The extent of the deviations from list prices was indicated by the study of the fertilizer industry made by the Federal Trade Commission which showed that discounts of 25 per cent from list prices was not uncommon. (**)

During the code the industry adopted open price filing so that prices and terms of sale for that period are available but we cannot accurately measure those prices against the ones which preceded or followed the Code.

The Bureau of Agricultural Economics of the U. S. Department of Agriculture publishes an index of retail fertilizer prices but the data from which the index is compiled is obtained from a dealer questionnaire and is made up of prices which the dealers say they charge farmers. This index is contained in Table 66. So far as has been ascertained no actual series of prices actually paid by farmers is available.

(*) Table submitted by Charles J. Brand, Executive Secretary and Treasurer, The National Fertilizer Association at the Hearings before the Senate Committee on Finance, April 12, 1935, Government Printing Office, p. 18.

(**) "Fertilizer Industry," Federal Trade Commission Report, March 3, 1923, Government Printing Office, p. 74.

The disadvantages of such indexes not based on real settlement prices is indicated by the following quotation:

> "During the past twelve months fertilizer prices have receded 12.6%. In actual practice mixed fertilizers have receded more than our index number shows for the index is based upon quotations of fourteen of the most used fertilizer analyses and not upon the final settlements." (*)

Chart XII shows how the index of fertilizer prices at the factory compared with farm prices at the farm from 1929 to 1934.

Chart XIII gives a comparative graphic presentation of the Department of Agriculture fertilizer prices and the prices paid by the farmer for commodities which he purchases and correlated with the prices which the farmer received for the things which he sold.

Chart XIV is a graphic illustration showing the same data for January 15, 1935 as contrasted to March 15, 1933.

Further detail on the relative cost of fertilizer and other commodities purchased by the farmer is contained in Chart XV which shows that fertilizer had advanced less relatively than any of the other commodities shown.

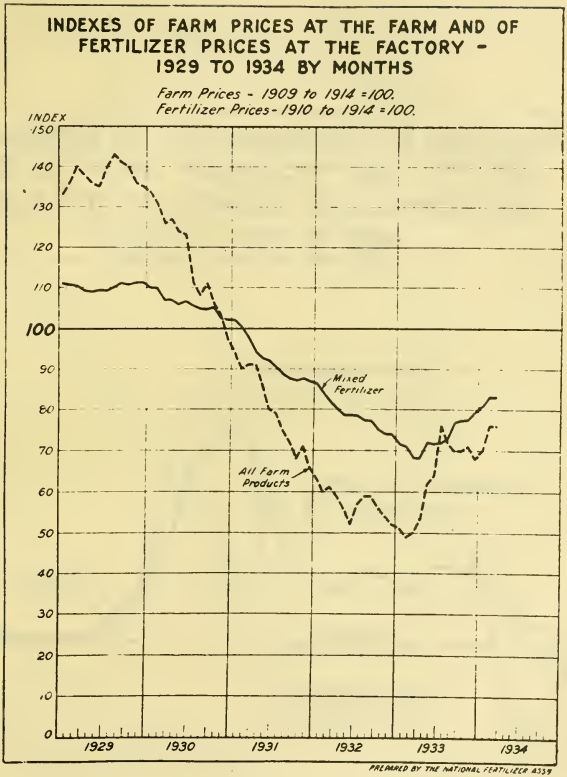
Chart XVI presents graphically the details of the relative increase in the price of fertilizer with the prices which the farmer received for certain farm products. This chart illustrates that fertilizer increased less in price than the increase in price received by any of the farm products shown.

Chart XVII presents this data in a more striking fashion showing the quantities of certain farm products necessary to purchase a ton of fertilizer for use on such products on January 1, 1935 as contrasted to January 1, 1933.

As indicated in a previous chapter the prices paid for a ton of fertilizer do not give a true picture of the value received by the farmer since the percentage of plant food in a ton of fertilizer has been continuously increasing. Table 69 which presents price data for the State of Vermont illustrates this point very nicely.

(*) "The Industry and the Association: An Appraisal," by Charles J. Brand, Executive Secretary and Treasurer, The National Fertilizer Association, Seventh Annual Convention, June, 1931, p. 23.

CHART XII



9761

CHART XIII

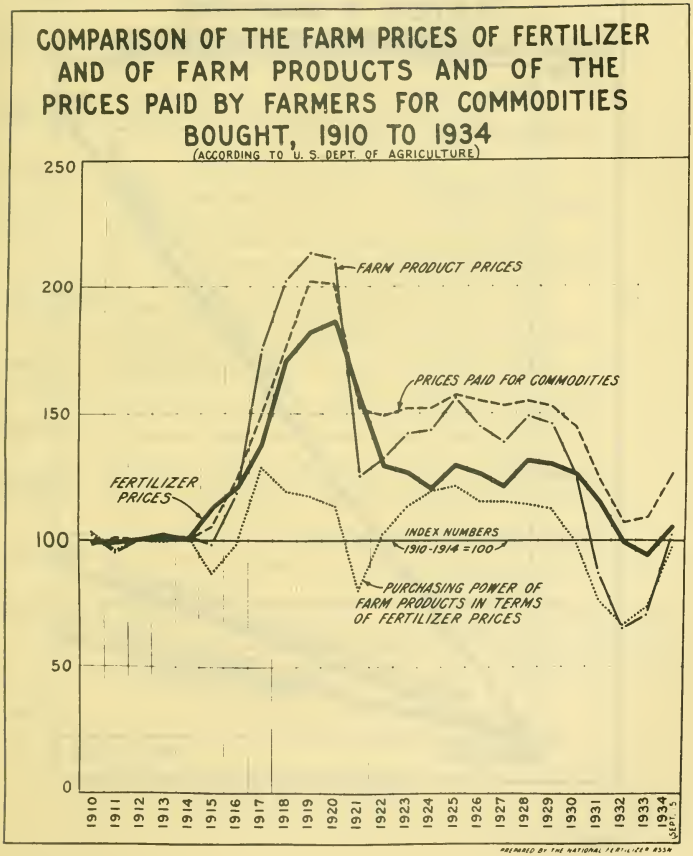

COMPARISON OF THE FARM PRICES OF FERTILIZER AND OF FARM PRODUCTS AND OF THE PRICES PAID BY FARMERS FOR COMMODITIES BOUGHT, 1910 TO 1934
(ACCORDING TO U. S. DEPT. OF AGRICULTURE)
250
200
150
100
50
0
FARM PRODUCT PRICES
PRICES PAID FOR COMMODITIES
FERTILIZER PRICES
INDEX NUMBERS 1910-1914 = 100
PURCHASING POWER OF FARM PRODUCTS IN TERMS OF FERTILIZER PRICES
1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934
PREPARED BY THE NATIONAL FERTILIZER ASSN.

CHART XIV

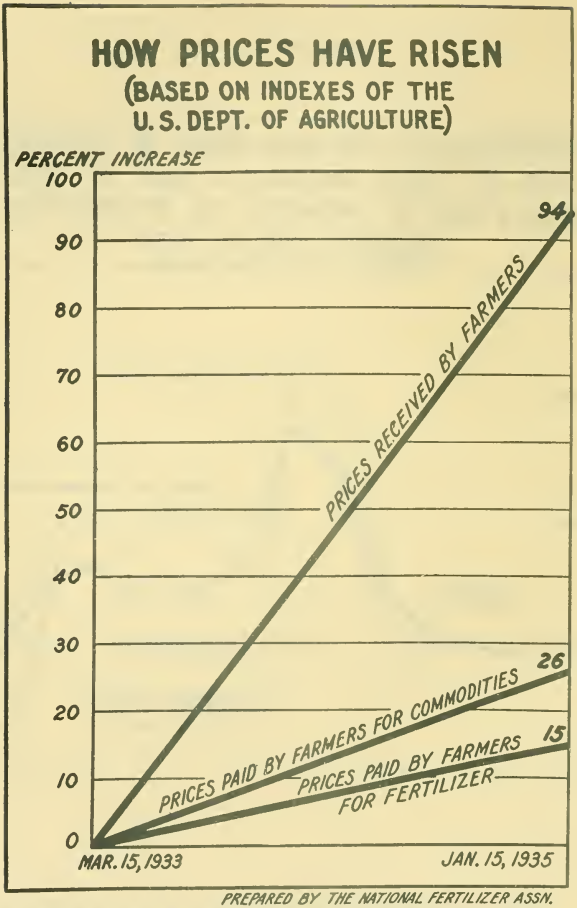

HOW PRICES HAVE RISEN
(BASED ON INDEXES OF THE
U. S. DEPT. OF AGRICULTURE)
PERCENT INCREASE
100
90
80
70
60
50
40
30
20
10
0
94
PRICES RECEIVED BY FARMERS
26
PRICES PAID BY FARMERS FOR COMMODITIES
15
PRICES PAID BY FARMERS FOR FERTILIZER
MAR. 15, 1933
JAN. 15, 1935
PREPARED BY THE NATIONAL FERTILIZER ASSN.

CHART XV

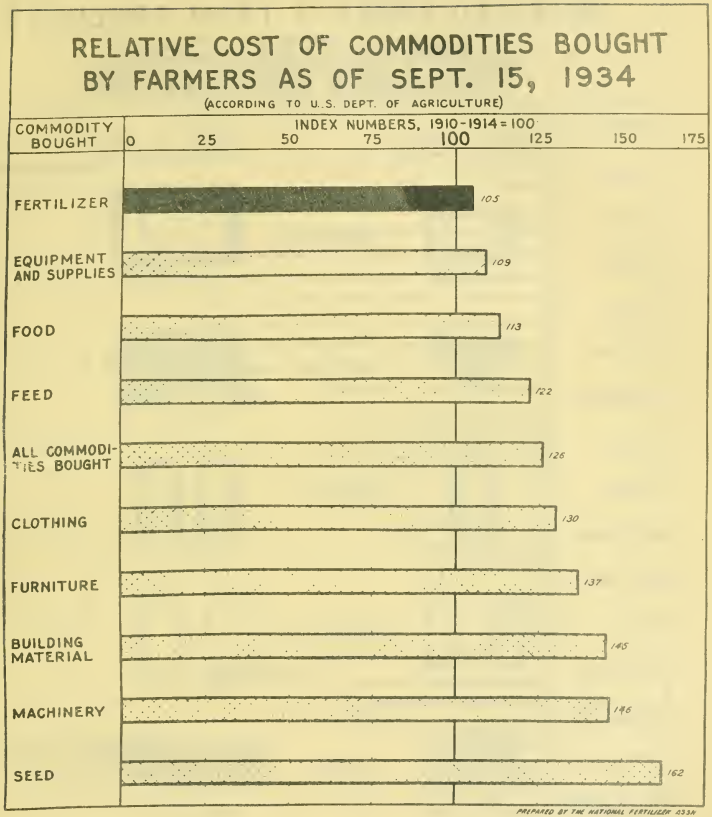

RELATIVE COST OF COMMODITIES BOUGHT BY FARMERS AS OF SEPT. 15, 1934
(ACCORDING TO U.S. DEPT. OF AGRICULTURE)
COMMODITY BOUGHT
INDEX NUMBERS, 1910-1914 = 100
0
25
50
75
100
125
150
175
FERTILIZER
105
EQUIPMENT AND SUPPLIES
109
FOOD
113
FEED
122
ALL COMMODITIES BOUGHT
126
CLOTHING
130
FURNITURE
137
BUILDING MATERIAL
145
MACHINERY
146
SEED
162
PREPARED BY THE NATIONAL FERTILIZER ASSN

CHART XVI

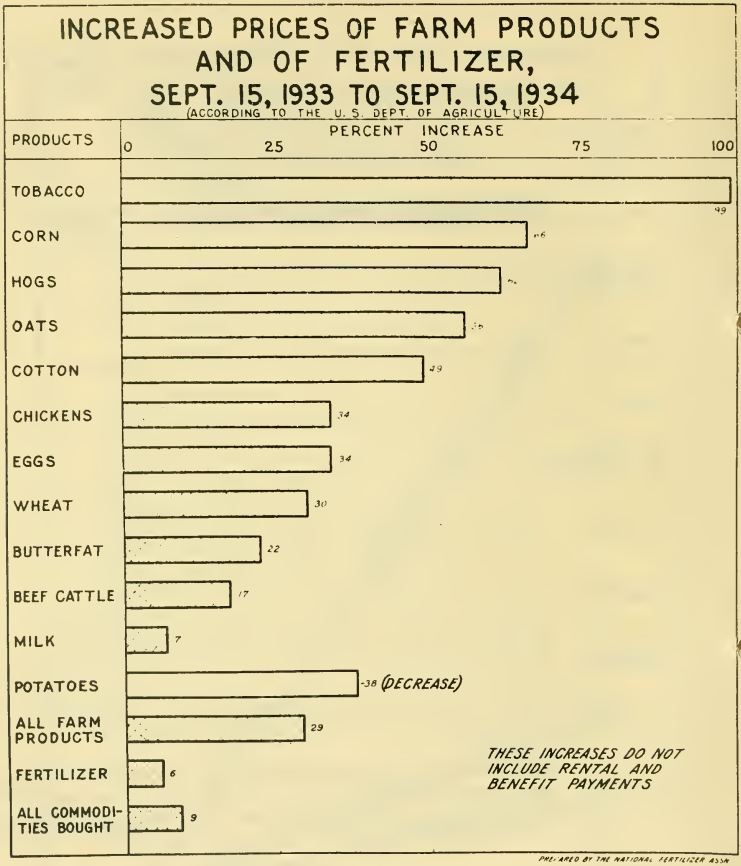
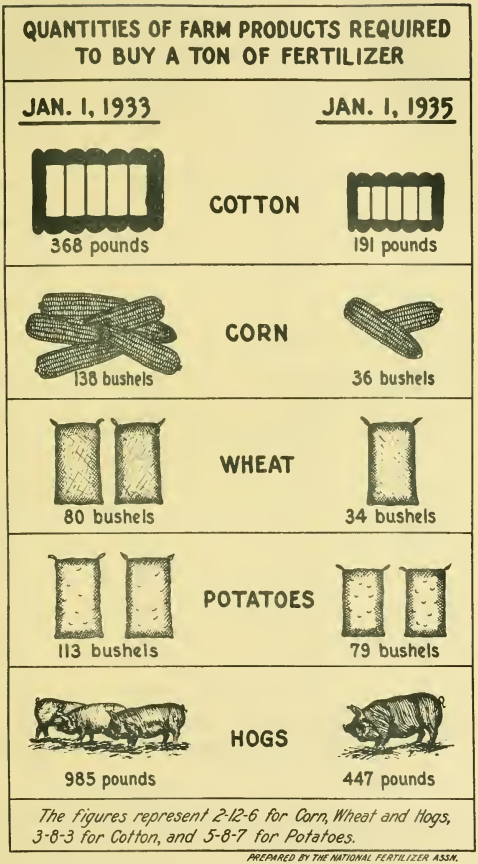

INCREASED PRICES OF FARM PRODUCTS
AND OF FERTILIZER,
SEPT. 15, 1933 TO SEPT. 15, 1934
(ACCORDING TO THE U. S. DEPT. OF AGRICULTURE)
PRODUCTS
PERCENT INCREASE
0
25
50
75
100
TOBACCO
99
CORN
66
HOGS
56
OATS
46
COTTON
39
CHICKENS
34
EGGS
34
WHEAT
30
BUTTERFAT
22
BEEF CATTLE
17
MILK
7
POTATOES
-38 (DECREASE)
ALL FARM PRODUCTS
29
FERTILIZER
6
ALL COMMODITIES BOUGHT
9
THESE INCREASES DO NOT INCLUDE RENTAL AND BENEFIT PAYMENTS
PREPARED BY THE NATIONAL FERTILIZER ASSN

CHART XVII



The above chart shows clearly that price increases of the past two years have placed the farmer in a more favorable position so far as his fertilizer purchases are concerned. A similar situation holds with respect to other farm products not shown in the chart.

TABLE 69

RETAIL PRICES OF FERTILIZER, POUNDS OF PLANT FOOD PER TON, AND PRICE OF PLANT FOOD PER POUND - VERMONT - 1922 - 1935 (*)

	Approximate average retail prices*	Approximate average pounds plant food in a ton**	Approximate average retail price of a pound of plant food	Percentage of pre-war prices	Percentage of 1916 prices
1922	$46	292	15.8¢	156	113
1923	44	305	14.3¢	141	102
1924	46	320	14.4¢	142	103
1925	46	327	14.1¢	139	101
1926	47	350	13.4¢	132	96
1927	42	353	11.9¢	117	85
1928	42	365	11.5¢	113	82
1929	44	371	11.8¢	116	84
1930	44	362	12.2¢	120	87
1931	45	410	10.9¢	108	78
1932	36	432	8.4¢	86	60
1933	34	453	7.5¢	77	54
1934	39	424	9.2¢	94	66
1935	36	444	8.1¢	83	58

* Approximate average price asked by "old line" companies
** Nitrogen, available phosphoric acid, potash

(*) Compiled from Vermont Agricultural Experiment Station Bulletins No. 334 (1931) table on p. 38, and No. 397 (1935) table on p. 19.

One thing the table shows is that the average retail price per ton for the seasons of 1932 and 1933, just prior to the code, were considerably lower than prices in 1916 and also as compared to pre-war prices. During the two seasons while the code was in effect the average per ton retail price increased somewhat from the low of the depression years but still did not come up to the level of pre-war of 1916 prices.

While these retail prices are important, the most significant information is contained in the section and third columns. Thus by the second column it is seen that whereas in 1922 approximately average pounds in plant food in fertilizer sold in Vermont was only 292 this average had increased to 444 pounds per ton in 1935. This is clearly indicative of the trend noticeable throughout the country towards the use of more highly concentrated fertilizers. Column 3 shows that during the same period, due to this higher concentration of plant food, the retail price per pound of plant food dropped from 15.8 cents in 1922 to 8.1 cents in 1935. Further it is interesting to note that not only was the per ton price higher in 1934 than in 1933 but cost per pound of plant food was also higher. This was not due solely to increased price per ton but also to decrease in the number of pounds of plant food in each ton.

Table 70 gives an example of pre-codal and codal prices for typical grades of mixed fertilizers.

THE CODE PROVISIONS AS TO PRICE AND COST

General Features

Previous to the code, price-cutting through one device or another had been prevalent in the industry. Attempts to eliminate rebating, sales apparently below cost, and granting of gratuities, fictitious credit terms and guarantees against price decline had failed. Recognizing the impossibility of stabilizing their industry without bringing these practices to a halt, it was but natural that numerous provisions thereon should be included in the proposed code and insofar as then existing NRA policy made it possible in the finally approved Code.

In the code as approved October 31, 1933, specific price practice provisions were incorporated in the following Articles; Article VI - Price Provisions, Section 1, prohibiting sales by any producer below his cost except to meet existing competition and Section 2, compulsory open price filing; Article VII - Section 2, prohibiting sales through traveling salesmen on commission, since it was believed that such salesmen often split commissions with the buyers; Section 5 providing for uniform contracts of sale; Section 7 enabling producers in various zones to set up rules and regulations; Article VIII, prohibiting certain specified unfair trade practices, 18 in number of which 12 had to do with rebating or other forms of price-cutting.

TABLE 70

RETAIL PRICES OF GRADES AS SPECIFIED - VERMONT - 1930 - 1935 (*)

Grade	1930	1931	1932	1933	1934	1935
2/10/2	..	$32	$29	$27	$31	$28
2/8/10	$40	37	35	33	35	34
2/12/4	..	..	34	32	40	39
3/10/6	41	39	32	35	35	34
3/10/4	..	..	32	30	37	30
4/8/4	41	38	33	30	34	31
4/8/7	40	36	34	32	39	33
4/8/10	..	..	38	35	39	35
4/12/4	43	44	33	32	30	31
5/8/7	45	42	37	35	41	37
5/8/10	..	..	43	34	41	39
6/8/6	..	..	34	33	32	30
7/8/6	..	..	39	37	42	37
8/16/14	...	..	48	48	59	51
8/16/16	..	..	48	50	52	47

(*) Vermont Agricultural Experiment Station Bulletins, No. 334 (1931), table p. 28; No. 361 (1933) table p. 17; and No. 397 (1935), table p. 19.

These bulletins contain prices on other grades but the series are not complete. This table includes all grades for which prices are given continuously from 1932.

Sales Below Cost Prohibited

Article VI, Price Provisions, Section 1, Sales Below Cost Prohibited, as finally adopted and approved, reads:

> "The sale or offer for sale by any producer of mixed fertilizer, superphosphate, and/or other fertilizer material at a price below his cost except to meet existing competition is hereby prohibited. The term 'cost' as used herein means the cost determined in accordance with uniform methods of accounting which shall be prescribed hereunder by the Fertilizer Recovery Committee with the approval of the National Recovery Administration. Such cost shall properly define the differences in factory, manufacturing, and mixing costs, and costs of distributing the product to producers, dealers, agents, and consumers, and such differences in cost shall be reflected in the sales price to each of these classifications."

This section contains two distinct provisions which are, however, intimately connected. (a) No producer could lawfully sell at a price below his cost except to meet existing competition and (b) such cost was to be determined according to a uniform accounting system presented by the Fertilizer Recovery Committee with approval of the NRA and also providing for recognition of differences in distribution costs as well as differences in manufacturing costs.

Uniform Cost Accounting System

The fertilizer industry was one of the few industries which had its accounting system approved by NRA (*). Their success in getting approval was undoubtedly due to the fact that they were ready to and did submit and secure approval of their Code at an early date, as policy of NRA, especially that of the Division of Research and Planning, later changed materially on this point and in fact it became for a while practically impossible for an industry to secure approval of a uniform cost accounting system.

The code as first submitted to the NRA, July 17, 1933, had a "no sales below cost" provision, but at that time was written in terms of "reasonable costs". "Reasonable cost" is defined as "the fair average cost determined by zones" as per uniform accounting system. The July 30 edition of the code read "reasonable cost plus a reasonable profit". Still another edition prohibited sales below "the cost" although some time prior to October 17 this was changed to read as at present "his cost".

Compliance with Cost Provision

Judging from the small number of complaints received by NRA, the "no sales below cost" provision was fairly well lived up to. A few

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(*) A copy of the Cost Accounting System is contained in the Fertilizer Industry NRA Archives as Exhibit D.

complaints were received by the Fertilizer Recovery Committee and satisfactorily adjusted by the group, with one exception which was referred to the Federal Trade Commission (*). What the situation might have been or would be in case of declining crop prices and decreased fertilizer sales there is no way of definitely knowing. It may be assumed that such conditions would put an additional strain on this point as it would seem that the declining markets led to abandonment of previous Federal Trade Commission fair trade practices.

Examination of NRA files, records and correspondence reveals very little difficulty over or complaints concerning the uniform cost accounting system. As far as ascertainable, it would seem that no manufacturer felt that the system adopted compelled him to figure into his costs items which rightfully did not belong and thus forcing him to sell at a higher price than he wished to.

A highly important concommittant of the "no sales below cost" provision was that of section 2 providing for the filing of open price schedules and the furnishing of copies thereof to each competitor. That is without such open price filing, but little if any check could be made as to whether sales were or were not below individual and compulsory, without cost data kept in uniform manner and there could be no way of checking suspiciously low price against actual cost.

Open Price Filing Provision

The provisions for the filing of open prices are contained in Section b of Article VI. This section which is given in full in the copy of the code in the appendix provided that within five days after effective date of the code, each producer should file with the Secretary of The National Fertilizer Association a statement showing the zones in which he intended to sell and also a schedule by zones setting forth the prices, dealers, agents or consumers, together with terms and conditions. This section also provided that copies of these schedules must be mailed or delivered to competitors.

After the filing of this schedule no sales should be made at prices or terms other than those contained in this schedule unless a new schedule had been filed in conformity with the section.

Provisions concerning these new schedules were that they could not be effective either for advancing or reducing prices until 10 days after a new schedule was filed with The National Fertilizer Association and copies of these new schedules also had to be mailed or delivered to competitors at the same time that they were sent to the association.

According to the code also, schedules were open to inspection by any producer. The one exception as to the 10 day waiting period was in case a producer was filing to meet existing competition in which case schedules might become effective on the same date as his competitors' schedule providing he filed so that this new schedule to meet competition

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(*) Appendix II, Exhibit 21, contains a discussion of these cases.

reached the Association at least 48 hours before the schedule he desired to meet was to become effective (*).

Regulations Regarding Open Price Filing

Shortly after the effective date of the code, the Fertilizer Recovery Committee through Mr. Brand, the Executive Secretary, issued a number of "regulations covering the filing of open price schedules", which later were revised and/or amended. The earliest edition which is in the files is dated December 28, 1933, and on July 11, 1934 there was issued a printed edition.

Authority for making these rules and regulations has not been found in the code. The introduction to the issue of July 11, 1934, contains the following paragraph:

> "The following revised Regulations Covering the Filing of Open Price Schedules with the Secretary of The National Fertilizer Association are promulgated under Article VI, Section 2, of the Code of Fair Competition for the Fertilizer Industry. These regulations have been approved by the Code Authority, acting through the Administrative Committee, and supersede all previous issues."

It is to be noted that this paragraph contains no reference to approval by the National Recovery Administration. This matter has been checked with the Legal Advisor, Mr. O'Brien, and his tentative conclusion on the matter is that this represents one of several similar cases in connection with codes where the code authority was permitted to exercise functions which while not specifically mentioned in the code were nevertheless felt to be in keeping with the spirit thereof.

There has not been located the authority or the exact reasons for certain subsequent revisions in or additions to the regulations for open price filing. For example, under date of April 11, 1935, the Industry was informed by the code authority that in filing open price schedules they "must definitely state the location of all factories and all producer-leased or producer-owned warehouses from which deliveries will be made by the producer." It would be interesting to know with reference to this and other similar additions or revisions why they were not included in the first draft of the regulations; what experiences induced the code authority to add them; how they were received by the Industry; which ones, if any, were dropped because they proved either unenforceable or undesirable.

In connection with this matter of the authority back of such rules and regulations considerable interest attaches to an inquiry directed by Mr. Brand to Mr. Edmund B. Quiggle, General Counsel, of The National

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(*) A discussion of the administrative procedure in handling schedules filed under the open price filing provision is contained in Appendix II as Exhibit 33.

Fertilizer Association. The Administrative Committee passed a resolution ordering Mr. Brand to refuse to receive for filing open price schedules which were faulty in any detail. Mr. Quiggle's advice to Mr. Brand was that it was not within his jurisdiction to so refuse and that such refusal might render Mr. Brand liable to suit for and recovery of damages. Mr. Quiggle's interpretation apparently was that the code merely required producers to file open price schedules with the Fertilizer Recovery Committee and that Mr. Brand's function was the actual filing thereof plus notification of interested parties that such schedules had been filed. Mr. Quiggle did inform Mr. Brand that it was within the latter's functions to act in an advisory capacity but that in giving advice to producers concerning the details of their open price schedules, he should make it clear that these suggestions were purely advisory and in no sense mandatory.

Section 7 of Article VII - Marketing Provisions - authorized the producers in each zone, subject to approval of the Fertilizer Recovery Committee and of the NRA to prepare uniform rules consistent with the code governing "methods of quoting prices, methods of distribution and methods of delivery".

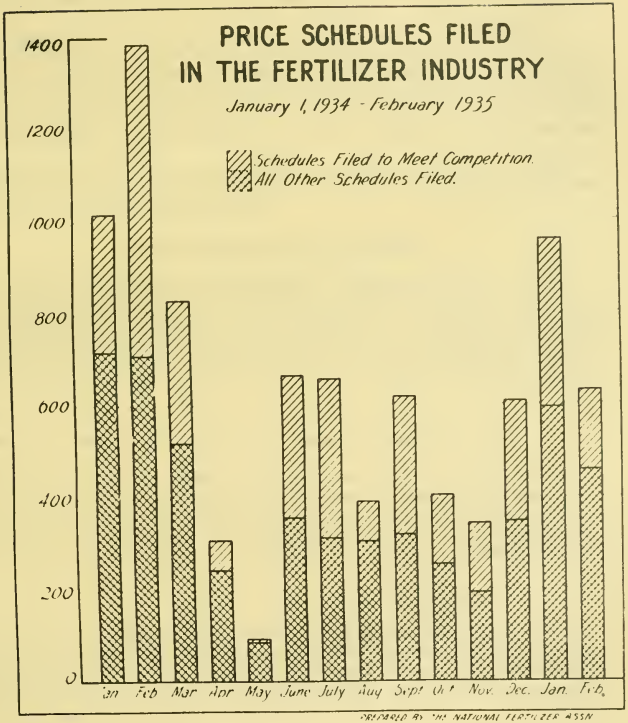
Experience Under the Open Price Filing Provision

From an examination of materials developed by an NRA group studying the open price schedules filed in accordance with these regulations certain generalizations can be made with reference to the open price filing system.

Price leadership seems to have existed just as it did in the pre-codal era and schedules filed by the price leaders in a particular territory were very quickly followed by schedules of other producers to meet such competition. In testifying before the Senate Committee on Finance, Mr. Brand presented a tabulation showing that between January 1, 1934 and January 23, 1935, 7,889 schedules had been filed of which 3,192 had been filed to meet competition (*) and Chart XVIII presents this graphically.

(*) Copy of this tabulation is included in Appendix II as Exhibit 34.

CHART XVIII


PRICE SCHEDULES FILED
IN THE FERTILIZER INDUSTRY
January 1, 1934 - February 1935
Schedules Filed to Meet Competition.
All Other Schedules Filed.
1400
1200
1000
800
600
400
200
0
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct
Nov
Dec.
Jan.
Feb.
PREPARED BY THE NATIONAL FERTILIZER ASSN.

Prices were relatively uniform at a given time in the various territories for particular grades of fertilizer and terms of sale also tended to be uniform.

Slowness with which some firms filed prices to meet competition raises the question as to whether or not their own price schedules were rigidly adhered to when competitors lowered prices. It seems likely that the expense and time necessary to file a complete new schedule when only a small change had been made in an old one tended to prevent the filing of a new schedule and must have acted to discourage price changes. While there is no evidence that the 10-day waiting period was used for coercive measures against price changes, the evidence does not establish that any waiting period as long as 10 days was necessary.

The sharp drop in prices after the Schechter decision may be partially attributed to the inactivity of that period of the year in fertilizer sales but is also an indication that the open price filing plan may have resulted in undue stabilization of prices. At best there can be but a tendency towards such stabilization since this industry is competitive enough to allow economic forces to operate in the long run.

One thing which the open price filing system did do was to give publicity to the actual prices and terms of sale which facts could not previously be correctly ascertained.

Price Changes During the Code

In order to determine what happened to prices during the codal period we have a series of price indices compiled by different agencies. The Bureau of Labor Statistics has an index of raw material prices and of the wholesale prices of mixed fertilizer (*). As already discussed the Bureau of Agricultural Economics have an index of what the farmer pays for fertilizers but which is really what dealers say they charge farmers.

Table 71 includes this data for 1933-1935 inclusive (**)

In these indices we have the explanation of the relatively low increase in the cost of fertilizer to farmers as compared to the increases in the prices of other commodities which the farmer purchased. During the life of the code, the index of the prices of raw materials actually decreased from 72.3 in September 1933 (the last month preceding

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(*) The National Fertilizer Association also published indices but the Bureau of Labor Statistics uses the figures supplied by The National Fertilizer Association and even though different weighting is used the figures are approximately the same when reduced to the same base year.

(**) Details of the figures for the Bureau of Labor Statistics from 1926-1935 are contained in the Fertilizer Industry NRA Archives, Exhibit A, Table VIII, p. 14.

the adoption of the Code) to 71.6 in May 1935 (the last month of codal operation).

Raw material prices having gone down in the aggregate in spite of the increases of 20-25 per cent in the price of superphosphate (the one fertilizer material produced by the fertilizer manufacturers and which has been discussed in Chapter II) allowed fertilizer manufacturers to make a fair profit without advancing prices to too great a degree since fertilizer materials represented about 63 per cent of their total cost.

The Bureau of Labor Statistics publishes a series of prices in South Atlantic States for the cotton fertilizer known as 3-8-3 from which an idea may be obtained to the actual changes in price. Table 72 contains this price series.

TABLE 71

PRICE INDICES OF FERTILIZER MATERIALS AND MIXED FERTILIZER

	Wholesale (1) Fertilizer Materials	Wholesale (1) Mixed Fertilizers	Retail (2) Fertilizers & Fertilizer Materials
1933 Jan.	67.6	64.5	-
Feb.	66.8	64.2	-
Mar.	67.2	61.8	69.7
Apr.	68.3	61.7	-
May	74.7	64.9	-
June	73.8	64.8	-
July	74.5	65.1	-
Aug.	74.9	66.2	-
Sept.	72.3	69.7	75.9
Oct.	73.4	70.3	-
Nov.	73.6	70.5	-
Dec.	73.9	71.9	78.2
1934 Jan.	74.3	73.2	-
Feb.	75.1	74.6	-
Mar.	75.5	74.7	79.5
Apr.	74.6	74.8	-
May	72.1	75.3	-
June	73.7	75.5	-
July	73.4	74.9	-
Aug.	70.4	75.1	-
Sept.	72.1	75.1	80.6
Oct.	71.3	75.1	-
Nov.	70.1	75.6	-
Dec.	70.9	75.8	-
1935 Jan.	72.2	75.4	-
Feb.	71.9	74.9	-
Mar.	72.0	74.9	81.2
Apr.	71.7	75.0	-
May	71.6	75.2	-
June	71.3	76.6	-
July	71.3	70.6	-
Aug.	72.5	70.1	-
Sept.	73.0	69.8	75.9
Oct.	73.0	69.9	-
Nov.	73.3	69.5	-
Dec.	70.0	69.7	-

(1) Bureau of Labor Statistics indexes of wholesale prices of "Fertilizer Materials" shifted to a 1929 base.
(2) Bureau of Agricultural Economics index 1910-1914-100.

TABLE 72

BUREAU OF LABOR STATISTICS PRICE OF 3-8-3 IN SOUTH ATLANTIC STATES
(DOLLARS PER TON)

	1933	1934	1935
January	$14.25	$17.38	$18.15
February	14.25	17.38	18.15
March	14.25	17.25	18.15
April	14.25	17.25	18.15
May	14.25	17.25	18.15
June	14.25	17.25	18.15
July	14.25	17.25	15.73
August	14.25	17.25	15.73
September	16.00	17.25	15.73
October	15.25	17.25	15.73
November	15.25	17.25	15.73
December	16.75	18.15	15.73

Thus from these figures we see that the price of 3-8-3 increased 27.4 per cent from March 1933 to March 1935, it increased only 13.4 per cent during the Code from the $16.00 in September 1933 to the $18.15 in May, 1935. The reported decrease since the Schechter decision from $18.15 to $15.73 is equivalent to a 13.3 per cent decline.

The Bureau of Agricultural Economics index above referred to indicates that in March of 1934 and 1935 prices were only 14 and 15 per cent, respectively above those of the comparative period of the pre-code year 1933.

CHAPTER V

CODE ADMINISTRATION

CODE AUTHORITY ORGANIZATION

The provision authorizing the selection of a code authority as it appeared in the approved code was as follows:

> "To effectuate further the policies of the Act, a Fertilizer Recovery Committee is hereby designated to cooperate with the Administrator as a Planning and Fair Practice Agency for the Fertilizer Industry. This Committee, constituting the Code Authority, shall consist of not less than twelve representatives of the Fertilizer Industry, selected by a fair method of selection to be approved by the Administrator. Three members without vote may be appointed by the President of the United States." (*)

NRA Approval of Code Authority Personnel

On November 20, 1933, the Executive Secretary of the Fertilizer Recovery Committee requested NRA approval of the selection of thirty-two members of the code authority. The names submitted were those of the pre-code Fertilizer Recovery Committee (**) with the addition of the following:

L. W. Brittor, Consolidated Rendering Company, Boston, Mass.
E. H. Westlake, Tennessee Corporation, New York City.
J. A. Miller, Price Chemical Company, Louisville, Kentucky.
C. R. Clapp, Swift & Company, North Portland, Oregon.

Formal approval of the code authority personnel was extended by NRA under date of December 6, 1933, the order of approval also giving official sanction to the appointment of Charles R. Baxter as Administration Member (***).

Representative Nature of Code Authority

As constituted at the time of Administrative approval, the code authority was entirely representative of all geographic areas of the country. Generous representation was given small industry interests on the code authority, its membership being composed of fifteen

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(*) See Article III, Section 3 of the Code for the Fertilizer Industry, Codes of Fair Competition, Volume II, page 125.

(**) The personnel of the Fertilizer Recovery Committee was referred to in Chapter I, and the names of its members are included in the Appendix as Exhibit 12.

(***) Administrative Order No. 5-8. (In NRA Files)

representatives of smaller companies, eight of firms of medium size and eleven of the larger companies. (*)

The record discloses no objections from any source as to the personnel of the code authority as selected, nor to the method of selection. In this regard, however, it may be noted that the personnel was appointed by the President of the National Fertilizer Association before approval of the code, and obviously before any method of selection had been approved by the Administrator, as provided in the code article on Administration. Apparently no question was raised regarding this by the Legal Division of NRA or other Advisory Board.

Changes in Code Authority Personnel

On July 2, 1934, the Executive Secretary of the Code Authority advised the Deputy Administrator that L. W. Britton and C. A. Holderness had tendered their resignations as code authority members. In his letter, the Executive Secretary requested approval of the code authority's acceptance of the resignations, and also requested administrative approval of the following newly selected members of the code authority:

G. V. Savitz, International Agricultural Corp., New York City.
J. S. Coale, I. P. Thomas & Son Co., Philadelphia, Pa.
W. T. Wright, F. S. Royster Guano Co., Norfolk, Va.
A. L. Ivey, Virginia-Carolina Chemical Co., Richmond, Va.

Approval of the requests of the code authority was extended by NRA under date of August 7, 1934. (**)

Ovid E. Roberts, Jr., was appointed Administration Member of the Code Authority on March 1, 1935 (***) to succeed Charles R. Baxter whose resignation had been tendered and accepted.

No other changes were made in the code authority organization, the code provision stipulating no length of tenure of office for code authority members.

Code Authority Sub-Committees

The code provided the following authority for the delegation of administrative powers and duties to individuals or sub-committees

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(*) Testimony of Charles J. Brand, Executive Secretary, The National Fertilizer Association, before Committee on Finance, United States Senate, 74th Congress, April 12, 1935, p. 2. of Proceedings.

(**) Administrative Order No. 67-31. (In NRA Files)

(***) Administrative Order No. 67-51. (In NRA Files)

of the code authority:

> "The Code Authority may delegate or appoint individuals and subcommittees in carrying out its administrative work, with such of its power or powers as may from time to time be conferred by the Code Authority upon said individuals or subcommittees, responsibility, however, to remain with the Code Authority."
>
> "The Code Authority shall appoint, from its own membership, an Administrative Committee of eight members. Said Committee shall exercise such authority as may have been delegated to it by the Code Authority except that the Administrative Committee shall not make recommendations for the amendment of this code unless recommendations for such amendments have been approved in writing by two-thirds of the members of the Code Authority. The Administrative Committee shall serve as the executive agency of the Fertilizer Recovery Committee, which constitutes the Code Authority."

An Administrative Committee of eight members and an Administrative Subcommittee of three members were appointed shortly following approval of the code, and were delegated authority to perform certain code authority functions between code authority meetings (*). Members of the code authority served on these committees on a basis of rotation. Meetings of the administrative committees were generally attended by the Administration Member of the code authority.

Functioning of Code Authority Personnel

Members of the industry selected for membership on the code authority apparently accepted the duties in a conscientious manner and devoted a great deal of their time to matters pertaining to the code and its operation. In addition to the time devoted to attendance at meetings of the code authority, its members also served as members of the administrative and zone executive committees which placed further burdens on their time.

While recent sales figures of the larger companies are not available, it has been estimated that a major portion of the total annual volume is done by a small group of these firms. These companies were members of The National Fertilizer Association, and it is evident from the method of assessing for association dues that they contributed a most important percentage of the funds necessary for its support.

(*) Minutes of Code Authority and Administrative Committee meetings are in NRA Files; Fertilizer Code, Minutes of Meetings Folders.

While these firms were adequately represented in the formulation of the code and in its administration, it has not been apparent in the study made of the actions taken by the code authority that it was dominated by the larger members who had been the principal support of the association. In fact, the President of the American Agricultural Chemical Company, during the early months of code operation, presented his resignation from the code authority and its administrative committee, indicating that he at least was not exerting a dominant influence on the code authority.

Efficiency of Executive Secretary and Staff

It is obvious from the record that a great deal of the benefit which the industry derived from the operation of the code was due to the intelligent and aggressive efforts of Charles J. Brand as Executive Director and Secretary of the Code Authority.

Mr. Brand's long experience in work connected with the industry and thorough knowledge of its existing problems enabled him, with the aid of a competent staff of assistants(*), to capably handle the enormous volume of work necessary in effectively administering the code. The record indicates that Mr. Brand was frequently the balance wheel in difficult situations arising from varying viewpoints of industry members on important matters pertaining to code operation, and it is apparent that his actions in all matters were motivated by a desire that the code be administered in the interest of the industry as a whole, with favor to no group or class within it.(**)

NRA Cooperation with Code Authority

Probably due to the aggressiveness of the Executive Secretary of the code authority in keeping NRA officials (***) acquainted with industry problems arising under the code, the records of code administration indicate that these officials had a sympathetic understanding of the problems and made a consistent effort to cooperate in effecting a solution.

It is apparent from the fact that the industry was permitted to retain such features in their code as a ten day waiting period in

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(*) A description of the qualifications of members of the staff of the Code Authority is contained in Appendix II and is labelled Exhibit 35.

(**) Opinion based on study of minutes of meetings of Code Authority and Administrative Committee.

(***) A description of the background of the NRA officials who administered the Code for the Fertilizer Industry is included in Appendix II, and is labelled Exhibit 35.

connection with the Open Price Filing Provision and an approved method of cost accounting that code authority members had convinced NRA officials that the industry required these devices to solve their problems.

It appears equally obvious that officials of NRA believed that undue restraint should not be exerted upon the code authority even though it appears that at times code provisions did not provide a basis for certain results achieved. (*)

(*) This opinion is based principally on a study made of zone rules which were recommended by zone executive committees, but which were never approved by NRA. Work Sheets supplied by the unit which studied the operation of the open price filing provision of the code show that rules which tended to provide a uniformity in terms and conditions of sale were generally adopted by producers in most zones. It is not a matter of available record that NRA officials took action to discourage or prevent the attainment of this uniformity, undoubtedly held by industry members to be essential to successful operation of the code.

TRADE ZONES

Zones as Originally Approved

The code authorized the code authority to divide the United States into appropriate trade zones to facilitate localized administration of the code (*).

The zones as originally established by the code authority, and which were made a part of the code when approved (**), followed generally the outline of districts which had been established by the National Fertilizer Association eight or ten years previously.

Shortly after the provisions of the code were made operative it became apparent to members of the code authority that it would be desirable to divide several of the zones into smaller areas for the purpose of simplifying the filing of price schedules by producers.

The principal reason for creating sub-zones was that producers were required to mail price schedules to all competitors within a zone or sub-division thereof (***). Until sub-zones were established, small producers, who operated entirely within a very limited area immediately adjacent to their plants, were required to mail all price lists to every other producer within the limits of a large zone. This obviously entailed a great deal of unnecessary labor and expense on the part of small producers which was eliminated by the establishment of the sub-zones, as it then became necessary to mail price lists to the other producers in the particular area in which an individual producer operated.

Another reason which made the establishment of sub-zones desirable was that the practice of filing prices on a "delivered to the farm" basis had become uniform with the producers in most zones. As these prices were based on average costs of transportation charges throughout a given area, reducing the size of the territory in which an established price was made applicable, provided a needed measure of flexibility in establishing "delivered" prices.

(*) See Article III, Section 3 of the Code for the Fertilizer Industry, Codes of Fair Competition, Volume II, page 125.

(**) See Schedule A of the Code for the Fertilizer Industry, Codes of Fair Competition, Volume II, page 134.

(***) See Article VI, Section 2-a-3, of the Code for the Fertilizer Industry, Codes of Fair Competition, Volume II, page 127.

At the request of the code authority, approval was extended by NRA to the establishment of sub-zones in Zone 3, 4, 8, 10, 11 and 12 (*).

Map No. 4 shows the alignment of all zones and sub-zones as established.

ZONE EXECUTIVE OR ADMINISTRATIVE COMMITTEES

Committee Established in Each Zone.

In carrying out the purpose of localizing efforts to obtain compliance with the code (**) and to assist the Code Authority in its administration, an executive or administrative committee was formed in each of the twelve zones.

Membership of Zone Committees.

At meetings held in each of the zones during the early months of 1934, industry members in attendance elected the members of these committees. The committees were composed of seven members, including a chairman who was usually a member of the Code authority. Membership of the Committees as established in each zone provided for two members representative of the larger industry interests, two of the medium size and two of the smaller companies. Equitable methods of voting were arranged in each zone (***).

Duties and Powers of Zone Committees.

At a meeting of the code authority held on January 19, 1934, the following duties and powers were delegated by the code authority to the zone committees (****):

(a) To obtain compliance with the fair trade practice provisions, and in the event of failure to secure compliance therewith, to forward all facts to the code authority.

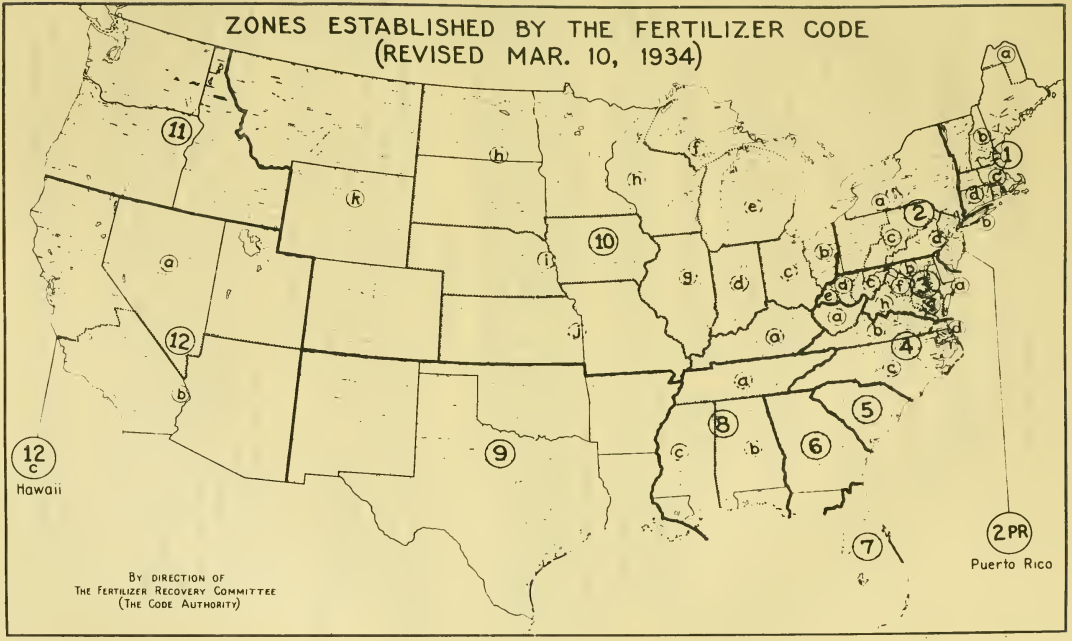
(*) Administrative Orders Nos. 67-5 and 67-28. (In NRA Files.)

(**) See Article III, Section 3 of the Code for the Fertilizer Industry, Codes of Fair Competition, Volume II, page 125.

(***) Methods of voting were not the same in all zones, but are described in detail in minutes of zone committee meetings, in NRA files, in folders marked, Minutes of Zone Committee Meetings.

(****) Minutes of Code Authority Meetings in NRA files, in folders marked Minutes of Code Authority meetings.

MAP 4


ZONES ESTABLISHED BY THE FERTILIZER CODE
(REVISED MAR. 10, 1934)
12 c
Hawaii
2 PR
Puerto Rico
By direction of
The Fertilizer Recovery Committee
(The Code Authority)

(b) To initiate and formulate recommendations for some rules to the code authority.

(c) To assist by education and direct contact in obtaining observance of price provisions.

(d) To report all actions taken to code authority and provide minutes of all meetings.

(e) To perform any special services requested by code authority

(f) In general, to act as local agency for the code authority in obtaining that cooperative compliance with the entire code necessary to make it a success.

Plans for Handling Trade Practice Complaints

At the earliest meetings of the zone committees, arrangements were made and procedure established for the handling of complaints of alleged violation of the trade practice provisions of the code.

In each zone, a Secretary was selected by the Executive Director of the code authority and assigned to the zone committees. The principal duties of the Secretary were in connection with the investigation and, where possible adjustment of complaints of alleged code violation. Members of the zone committees also acted in the capacity of local compliance committees in code matters.

Zone Rules

As contemplated in the code (*), producers in each zone apparently considered it of major importance that rules relative to methods of quoting prices, methods of distribution and methods of delivery be recommended to the code authority for adoption. Consideration was given to such rules at the first meetings held. When approved by the code authority and NRA, the rules were to become binding upon all industry members selling within the zone.

Inasmuch as NRA was not requested to extend approval to the rules recommended by any of the zone committees, recommendations which were made are not discussed in full detail. However, for the reason that, although the rules were not officially adopted, a majority of the producers filed their open price schedules in such manner as to incorporate certain of the rules which zone committees had recommended, mention will be made of the more important items and those which were generally adopted by the producers.

(*) See Article VII, Section 7, of the Code for the Fertilizer Industry, Codes of Fair Competition, Volume II, page 129.

Adoption of "Delivered to the Farm" Prices

Although opinion was to some extent divided on the matter, producers generally favored quoting prices on a "delivered to the farm" basis, based on the average cost of delivery throughout the zone or any subdivision thereof. In connection with this recommended rule, a further rule was usually proposed, providing for a uniform allowance for hauling by truck from the purchaser's nearest railroad station or boat landing, in cases where it was desirable for the producer to make deliveries only to such points.

Other Recommended Rules.

Another proposed rule, generally recommended for adoption in the various zones, was to provide uniform schedules of trucking allowances in cases where purchasers called at the producers' or agents' warehouses and hauled the materials in their own trucks.

In certain zones, rules were recommended for adoption which would have practically eliminated distribution of fertilizers through dealers.

Other rules which were recommended would have established uniform discounts for payments within various time limits to be allowed the different classes of purchasers and agents.

Rules Adopted Although not Approved by NRA.

Minutes of code authority meetings and copies of letters written the Executive Director of the code authority indicate that there was a general feeling that the rules recommended by the various zones would not be favorably passed upon by NRA, and it was apparently decided by the code authority that formal request would not be made for such approval. However, as practically all of the producers in the zones incorporated the provisions of the recommended rules regarding uniform methods of quoting prices and delivery charges in their open price schedules (*), and, as when so filed, they became entirely binding on the producers filing the schedules, the result was apparently the same as though the rules had been submitted to and approved by NRA.

Warning of Executive Director of the Code Authority

That the Executive Director of the code authority saw some legal danger in the situation if certain rules were adopted in the zones without the required approval of NRA having been obtained,

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(*) Conclusions confirmed by study of Work Sheets, "Study of Open Price Filing in the Fertilizer Industry".

is indicated in the following letter (*) sent by the Secretary of the code authority to all producers in the industry:

"Inquiries and information received by this office indicate that there is still some misunderstanding as to the right of producers of fertilizer in the different zones to make zone rules for the conduct of their business. It seem appropriate at this time to clarify the situation.

"The only authority given by the fertilizer code to producers in the various zones to prepare rules for the conduct of their business is in section 7 of Article VII:

'Section 7 - Methods of quoting prices, methods of distribution, and methods of delivery:

'The producers in each zone, acting in accordance with procedure established by the Fertilizer Recovery Committee and subject to its approval, are authorized to prepare uniform rules, not inconsistent with any provision in this Code, governing the methods of quoting prices, methods of distribution and methods of delivery, including trucking allowances, to be used in the sale of mixed fertilizer, superphosphate, and/or other fertilizer material in such zone or subdivision thereof. Such rules, when so prepared and approved by the Fertilizer Recovery Committee, shall be submitted to the National Recovery Administration, and when approved by it shall be binding upon all producers selling said products in such zone or subdivision thereof.'

"This section quoted does not authorize the producers in the zones to prescribe or give binding effect to any rules prepared by them. It authorizes them merely to frame proposed rules for their zone which are not to be inconsistent with any Code provision, covering three subjects, namely, (1) methods of quoting prices, (2) methods of distribution, and (3) methods of delivery, including trucking allowances and to submit them for the approval of the Fertilizer Recovery Committee and the National Recovery Administration. Until approved by the Fertilizer Recovery Committee and the National Recovery Administration, the rules have no binding effect whatever under the Code.

"The foregoing understanding is important in its relation to the operation of the Federal anti-trust laws which prohibit

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(*) Letter dated May 22, 1934, from Charles J. Brand, Executive Director of the Code Authority to all producers of mixed fertilizers. (In NRA Files, Fertilizer Industry Code, Zone Rule folder.)

restraints of trade in interstate or foreign commerce.

"Section 5 of the National Industrial Recovery Act provides in part:

> 'Sec. 5. (Antitrust laws, exceptions.) - While this title is in effect (or in the case of a license, while Section 4(a) is in effect) and for sixty days thereafter, any code, agreement, or license approved, prescribed, or issued and in effect under this title, and any action complying with the provisions thereof taken during such period, shall be exempt from the provisions of the anti-trust laws of the United States.'

"Under the above section, any action taken pursuant to the provisions of an approved Code of Fair Competition is exempt from the Federal antitrust laws notwithstanding that such action might in the absence of a Code provision authorizing it be in violation of the antitrust laws. On the other hand, the existence of a Code does not protect the members of an Industry subject thereto from prosecution under the antitrust laws for any action taken by them outside of the authority of the Code, notwithstanding that it may have a relationship to matters dealt with in the Code.

"For instance, under Section 7 of Article VII of the Fertilizer Code, the producers in any zone would be authorized to meet for the purpose of preparing marketing rules to be submitted to the Fertilizer Recovery Committee and the National Recovery Administration for their approval, and enter into an open discussion thereof without thereby incurring liability under the antitrust laws, as that is clearly permitted by the Section. However, in advance of such approval by both the Fertilizer Recovery Committee and the National Recovery Administration, the producers would not be authorized to agree either expressly or by implication to abide by such rules without incurring the risk of violating the antitrust laws provided any such rules were in restraint of trade. Without the approval of such rules by both the Fertilizer Recovery Committee and the National Recovery Administration, the producers who agree to follow them are in the same situation insofar as the antitrust laws are concerned as if no Code whatsoever were in existence, or, as if the Recovery Act itself had not been enacted.

"Agreements in restraint of trade may be inferred from all of the circumstances of a given situation even though there is no express understanding. Express or inferable agreements or understandings put into practice or designed to become effective without approval by the Fertilizer Recovery Administration, if in restraint of trade, do not receive any protection from the Code and hence are fraught with the gravest danger. It is therefore important that

the producers in the different zones confine themselves solely to the preparation and recommendation of marketing rules under Section 7 of Article VII of the Code if they desire to be protected against complaints under the Federal antitrust laws."

Complaints of Recommended Rules

The above letter was very probably occasioned by complaints which were registered by a number of producers (*) who preferred to quote prices f.o.b. their plants rather than on a "delivered to the farm" basis and by trucking companies and the American Trucking Association to the effect that they had been placed at a disadvantage in the allowances made for trucking fertilizer materials in uniform schedules filed by producers in several states. It is possible also that it may have been felt that the letter should be sent to correct any false impression that might have been gained through the following paragraphs contained in the N.F.A. News (official Code Authority organ) on February 5, 1934:

"ZONE MARKETING RULES BINDING IF INCLUDED IN PRODUCERS' PRICE SCHEDULE. -- We have repeatedly stated in the News that the Zone marketing rules, regulations, interpretations, and recommendations that were adopted by the various zones have not been approved either by the Fertilizer Recovery Committee or the National Recovery Administration. As soon as it is possible to do so the Administrative Committee and the Sub-Committee will consider each of the rules individually. Some of the rules will be approved, and the Industry will be notified promptly. Undoubtedly some of them will be disapproved.

"In the meantime, however, all such marketing provisions as are included in the open price schedules of producers are binding upon them and upon all competitors who have included the same provisions in their schedules. Producers who have not included zone rules in their schedules are, of course, not bound by them."

It is obvious from the above that producers in the various zones who were desirous of attaining uniformity in terms and conditions of sale could do so by incorporating similar provisions in their respective price schedules.

(*) Correspondence in NRA Files, Fertilizer Industry Code, Complaints folders.

CODE AUTHORITY BY-LAWS

Although the code authority and its various committees began functioning in an apparently systematic manner immediately after the effective date of the code. By-Laws adopted for code authority operation were not presented for N. R. A. approval until December 15, 1934. After revisions suggested by N. R. A. had been accepted by the code authority, formal approval was extended on February 26, 1935 (*).

Code Authority Representation for Non-Association Members

As approved, Section 1 of Article III of the By-Laws provided for election to the code authority of two members of the industry, not members of the National Fertilizer Association. This provision was made in accordance with N. R. A. policy as regards the personnel of Code authorities, and the record does not indicate that it was inserted in the By-Laws to answer any criticism made of the code authority as constituted. Two such members, elected in accordance with this provision, would have been added to the code authority at an industry meeting held in June, 1935, had not the Schechter decision intervened.

By-Laws Effected No Change in Code Authority Personnel

Another provision of the By-Laws provided that not more than two members of the code authority should be connected with the same producer, an exception being made in the case of ex-officio members of the code authority. This provision and others inserted in the By-Laws to insure a code authority truly representative of all interests in the industry, did not make necessary any changes in the personnel of the code authority as originally selected.

Section 6 of Article IV, providing that actions of the code authority were to be taken on an affirmative vote of a majority of voting members present at a meeting, was in accordance with procedure of the code authority established previous to approval of the By-Laws. Action to amend the code in any manner required a majority vote of code authority members.

Section 7 of Article IV prohibited votes by proxy at code authority meetings as well as the appointment by members of alternates to attend code authority meetings.

By-Law Provision for Code Authority Officers

Officers of the code authority, as provided in Section 1 of Article V, included a Chairman, Vice Chairman, Executive Director, Secretary, Treasurer, Assistant Secretary, and an Administrative Assistant. These officers had been selected previous to approval of the By-Laws. No duties or powers not usually granted code authority officers in By-Laws approved by N. R. A. were granted the officers in the By-Laws of the code

(*) Administrative Order No. 67-50. (In N. R. A. Files.)

authority for this industry.

Other By-Law Provisions

Other sections of the By-Laws, a copy of which is included in the Fertilizer Industry N. R. A. Archives, labelled Exhibit B, provided an orderly procedure for the handling of code matters by the code authority and its Agencies, including zone executive committees, and contained no provisions other than those generally approved without question by the Legal Division of N. R. A.

BUDGET AND METHOD OF ASSESSMENT

Authority to Levy Assessments

The code provision (*) authorizing the collection of assessments from industry members for maintenance of the code authority did not provide a definite basis for assessing the members, but required that N. R. A. approval be obtained before a budget and method of assessment were adopted.

Submission of Budget

On May 12, 1934, the Executive Secretary of the code authority, in accordance with action of the Administrative Committee taken on April 24, 1934 (**), submitted a budget in the amount of $130,041.35, covering the period from November 1, 1933 to June 30, 1934, and a budget in the amount of $219,929.00, covering the period from July 1, 1934 to June 30, 1935, the latter budget also making provision for the possible expenditure of an additional $30,000.00 for the purpose of defraying the expense of any additional zone work that might be found necessary.

The amount of the budget for the eight months ending June 30, 1934 had been based on the actual expenditures of the code authority during the first six months of code operation and an estimate of probable expenditures for the months of May and June, 1934. The budget for the twelve months ending June 30, 1935, was estimated in the light of experience gained during the first six months of code authority functioning.

Expenditures as Proposed In Budgets

Proposed expenditures under these budgets were distributed as follows:

	Period Ending June 30, 1934	Period Ending June 30, 1935
I. Code Authority Expenses:		
A. Salaries	$36,500.43	$68,630.00
B. Office Expenses	25,669.93	31,144.00

(*) See Article XI of the Code for the Fertilizer Industry, Codes of Fair Competition, Volume II, page 133.

(**) Minutes of Administrative Committee meeting. (In N.R.A. Files, Fertilizer Industry Code, "Minutes" Folder.)

	Period Ending June 30, 1934	Period Ending June 30, 1935
C. Traveling Expenses	9,246.11	17,000.00
D. Legal and Auditing Fees	8,232.20	9,200.00
E. Miscellaneous	954.98	17,000.00
II. Committees and Facilities Thereof:		
A. Traveling Expenses	431.88	7,000.00
B. Printing and incidental expenses	952.25	2,000.00
III. Zone Office Expenses:		
A. Salaries	27,413.65	57,210.00
B. Office Expenses	14,984.43	15,295.00
C. Traveling Expenses	5,655.76	11,150.00
Total	$130,041.65	$219,929.00

Method for Assessment of Industry Members

I. Sold and/or consigned and shipped either direct or through Agents to dealers or consumers:

	Bagged (In cents per ton)	Bulk
A. Mixed fertilizer, including processed manures and commercial guanos; superphosphate; basic slag - imported; fertilizer materials, except those listed in Paragraphs B and C:	4.0	3.2
B. Kainite, peat, humus, sewage, sludge, garbage tankage, and similar organic material of low value; hydrated burned rock and shell lime, basic slag - domestic, and gypsum:	2.0	1.6
C. Phosphatic material, excluding rock exports; ground limestone, (including dolomite), and ground shell lime, marble dust, etc.:	1.0	0.8
II. Sold and/or consigned and shipped to other producers or wholesale cooperatives:		
A. Mixed fertilizer, including processed manures and commercial guanos, superphosphate, and imported basic slag	2.4	2.0
B. Hydrated burned rock and shell lime, domestic basic slag, and gypsum:	1.2	1.0
C. Ground limestone (including dolomite) & ground shell lime, marble dust, etc.:	0.6	0.5

Receipts Contemplated Under Method of Assessment

Based on the tonnages of the various materials as reported by practically all producers for 1933 and the first half of 1934, the above rates of assessment were expected to bring slightly less than the amount set forth in each budget. A minimum rate of $20.00 per year was set for all producers other than producers of specialty fertilizers; the minimum rate for producers of specialty fertilizers, not otherwise engaged in the fertilizer business, was $15.00 per year.

Budget Generally Satisfactory to Industry Members

After consideration by N.R.A., the budgets were notices for "Opportunity to be Heard" under date of July 14, 1934. The record discloses only five complaints from industry members (*) regarding the budgets and method of assessment. Three of these were from firms which handled relatively small quantities of processed manures, and the complaints were generally to the effect that this product should be assessed at a lower rate than mixed fertilizers; one other firm protested on the basis of its poor financial condition; the other complaint appeared to be based on the fact that the firm did business in one county only, although statements made in the complaint indicated that the firm did an annual business of approximately 2500 tons. After due consideration, it was not considered that the complaints were of sufficient importance to warrant withholding approval of the budgets.

After having been approved by the Legal Division and the Research and Planning Division, and upon the recommendation of the Deputy Administrator, the budget and method of assessment were formally approved by N. R. A. (**)

Budgets Adequate For Code Authority Operation

In comparison with budgets of other code authority of industries of similar size, the budget for the fertilizer industry might be considered somewhat excessive. Consideration, however, should be given to the fact that a great deal of the total expense was for maintenance of the twelve offices, without which it is not probable that the code authority would have functioned as effectively.

It is not apparent from a study of the minutes of code authority meetings or files of the deputy administrator that any of the budget items were considered extravagant by members of the industry. On the other hand, it appears that the funds provided were adequate to permit the code authority to carry out an effective administrative program.

In connection with the size of the budgets, it is of interest to note that in a number of years the National Fertilizer Association had

(*) Correspondence in N. R. A. Files, Fertilizer Industry Code, "Budget" Folder.

(**) Administrative Order No. 87-32. (In N. R. A. Files.)

operating budgets in excess of $200,000.00 (*). These funds had been raised by assessing Association Members on a basis which ranged from 1½¢ per ton on superphosphate to 4¢ per ton on mixed fertilizer. The amount of individual code authority assessments was included in the dues of members of the association. As these members were responsible for a major portion of the annual volume of sales, financing of the code authority did not present any serious problem in this industry.

Payments of Code Assessments not Mandatory

The code provision authorizing a budget for code authority maintenance did not provide for mandatory payment of assessments by industry members. Although it would have been possible to have amended the code without the formality of a public hearing so as to include the standard provision requiring mandatory payment, the code authority in this, as in other instances, was apparently reluctant to open the code for any amendment regardless of its nature.

Termination of Exemption Granted in Order X-36 not Requested

Although numerous producers of mixed fertilizers and fertilizer materials are engaged in these activities as an adjunct to other and larger business and were thus given exemption from paying code assessments to the code authority for the fertilizer industry in Administrative Order No. X-36, the code authority did not request a termination of the exemption granted in this Order, although such request was made by a majority of code authorities in similar circumstances. While it would seem that termination of the exemption would have been desirable action on the part of the code authority, the record does not indicate that the exemption presented any serious difficulties to the code authority in making collections from the firms affected, and no problems in this connection were presented to NRA for solution. This was undoubtedly due to the fact that the major portion of assessments were collected in the form of dues to the National Fertilizer Association.

Report of Receipts and Expenditures

A report submitted by the code authority as of December 31, 1934 (**) indicated receipts of $39,875.85 and expenditures of $41,827.50. No later report is available, but on May 16, 1935, the Executive Secretary of the code authority stated in a letter to all fertilizer producers that 635 out of a total of approximately 700 producers had paid assessments and that these producers represented 98 per cent of the industry volume.

(*) A description of the methods of financing the various activities of the National Fertilizer Association is contained in Appendix II and is labelled Exhibit 36.

(**) Detailed financial report. (In NRA Files, Fertilizer Industry Code, Budget Folder.)

TRADE PRACTICE COMPLAINTS COMMITTEE

Need for Adequate Organization for Compliance

Members of the code authority, with knowledge gained through the experience of previous codes, recognized the fact that if the industry were to derive substantial benefit from the code, it would be necessary to provide adequate machinery for the prompt and effective handling of complaints of violation of the trade practice provisions. The matter of perfecting an efficient organization was, therefore, one of the first efforts of the code authority immediately following the approval of the code.

Authorization to Handle Complaints on Reference

NRA procedure for handling complaints of alleged violation of trade practice provisions was in the formulative stage during the early months of 1934, at which time the fertilizer industry was going into its first busy season under codal operation. The fertilizer industry was one of the **first** to make application to be authorized to handle these complaints "on reference," and this authorization was granted by NRA under date of February 15, 1934 (*). This authorization permitted the code authority to handle complaints of alleged violation of trade practice provisions after they had first been referred to an NRA State Compliance Director.

Formulation of Trade Practice Complaints Plan

On May 21, 1934, the Executive Director of the code authority, acting in accordance with a resolution passed by the administrative committee, requested NRA approval of a plan for handling trade practice complaints and authorization for the code authority to handle such complaints "in the first instance," or without previous reference to NRA State Directors. It was proposed in this plan that the administrative committee act as a Central Trade Practice Complaints Committee, and that the executive committee of each zone act as a local committee for handling the complaints arising within the zone.

Membership of the administrative committee rotated in such manner as to make it representative at all times of the different groups and interests in the industry. Its members indicated a willingness to devote the time required to handle the work involved in adjusting the trade practice complaints referred to it by the local or zone committees. The committee had a legal adviser, and the staff of the code authority employees was available for assistance in the handling of routine matters. It was proposed to make the Administration Member of the code authority an ex-officio member of the central trade practice complaints committee.

Code Authority Staff Increased

In order to insure trade practice complaints being handled in a

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(*) Letter, dated February 15, 1934, from Joseph F. Battley, Assistant Deputy Administrator, Division #3, to Code Authority, Fertilizer Industry. (In NRA Files, Fertilizer Industry Code, Trade Practice Complaints Committee Folder).

proper manner without delay, the code authority's staff had been augmented by the employment of James A. Dalbey to act as Chief of the Code Authority Compliance Division, and John F. Donovan as Field Investigator of such complaints. Both of these gentlemen were attorneys with Federal Trade Commission experience, and were ideally equipped through this experience to competently handle the duties assigned.

In each of the zones, a secretary was carefully selected whose duties were principally the handling of trade practice complaints. In a majority of the zones, the secretary selected had had legal training, and in each instance had been employed because of special qualification for the work (*).

N. R. A. Approval of Plan

Due principally to the fact that N. R. A. requirements as regards rules for code authority procedure were not entirely definite at that time, the code authority's application of May 21, 1934, was not approved. After negotiations had been carried on through a period of six months and adoption by the code authority of all suggestions made by N. R. A., a revised plan was submitted by the code authority under date of November 26, 1934, and was approved by N. R. A. on December 7, 1934 (**). Through inadvertance, the wording of this Order did not specifically approve the executive committee in each zone as a trade practice complaints committee for that zone, and at the code authority's request, this oversight was corrected on February 8, 1935 (***).

Procedure for Handling Complaints

Prior to formal approval by N. R. A. of the trade practice complaints plan, the code authority had proceeded with the handling of complaints of alleged violation of trade practice provisions in essentially the manner outlined in the plan as approved. This procedure, briefly described, was as follows:

1. Complaints made in writing, and containing a complete statement of facts, were filed with the zone trade practice complaints committee.

2. Upon receipt of a complaint in which it was found that the act complained of would constitute a code violation if substantiated, a letter was sent the respondent by registered mail, setting forth the nature of the complaint. This letter requested a statement of the respondent's position in the matter.

3. In the event a respondent made no answer to a complaint, or where in an answer the complaint was denied, the case was docketed for a hearing to be held by the zone committee.

4. In cases where the respondent admitted the facts, and gave as

(*) Description of the background of the Code Authority is contained in Appendix II, labelled Exhibit 35.
(**) Administrative Order No. 67-41. (In N. R. A. Files)
(***) Administrative Order No. 67-48. (In N. R. A. Files)

explanation satisfactory to the zone committee, the case was adjusted by notice of acceptance of the explanation by the zone committee, such notice being sent to both respondent and complainant.

5. In cases where no violation was found by the zone committee, respondent and complainant were so notified in writing by the zone secretary.

6. Proper notice of and procedure for hearings by zone and central committees were prescribed in the plan.

7. Provision was made for reference by the zone committee to the central trade practice complaints committee of cases in which the zone committee was unable to secure satisfactory adjustment.

8. Privilege was extended either complainant or respondent to appeal a decision of a zone committee, such appeal to be made to the central trade practice complaints committee.

9. Upon receipt of such appeal, and after review of all records in the case by the central trade practice complaints committee, a decision was rendered affirming or reversing the decision of the zone committee.

10. Procedure was outlined for reference to the Compliance Division of N. R. A. of cases in which the respondent refused to abide by the decision of the central trade practice complaints committee.

11. Respondents were informed in writing of their privilege of appealing any decision of the central trade practice complaints committee to N. R. A.

Plan of Procedure Adequate for Effective Operation

A review of all cases handled by the zone and central trade practice complaints committees indicates that the procedure outlined in the plan was generally followed, and was apparently adequate for the systematic handling of the complaints (*). A notable exception, however, was that in many cases in which a respondent denied the charges and in which the complainant was not able to fully substantiate them, the cases were marked "adjusted" without a hearing having been held by zone committee. However, the alleged offenses in many of these instances were of a minor nature, and the volume of cases arising in the more active zones made hearings in all such cases virtually a physical impossibility.

Cases Fairly and Efficiently Handled

The review of cases handled by the code authority agencies indicates that all the zone secretaries were aggressive in handling complaints promptly and efficiently, and that secretaries and members of zone and

(*) This opinion based on an investigation of compliance files of Code Authority by Fertilizer Study Unit.

central committees were eminently fair in consideration of cases brought to their attention (*).

LABOR COMPLAINTS COMMITTEE

No Plan Approved.

Although negotiations relative to the establishment of a labor complaints committee and plan for handling complaints of alleged violation of the labor provisions of the code were carried on for many months, a plan had not been approved up to the time of the discontinuance of the code. Consequently, labor complaints were handled for the most part by the Compliance Division of N. R. A., although a number were referred to the code authority for handling. These cases are discussed under the section on "Compliance" in this report.

(*) Operation of the code authority organization for handling trade practice complaints is further discussed under the Section on "Compliance" in this Report.

RULES AND REGULATIONS

First Difficulties of Administration Encountered

Among the first difficulties encountered in administering the provisions of the code were those arising from problems in connection with the proper classification of individuals, firms and corporations desiring to qualify as "producers", "agents", "dealers" and "wholesale cooperative associations", as defined in the code. In order to provide as definite a basis as possible for decisions regarding such classifications, the code authority in January, 1933, submitted six "Rules and Regulations" for the approval of NRA. These rules and the problems they were designed to assist in solving were as follows:

Rule 1. Any wholesale cooperative association (a cooperative association of the character described in sub-division a of Section 3 of Article VII) shall have the right to purchase potash, phosphate rock, and/or nitrogen carriers from producers or importers of these materials, even though such producers or importers do not file any schedule of prices to dealers and/or consumers in the areas covered by such cooperative association, provided that in all cases where such producers or importers do not file any schedule of prices to dealers and/or consumers, that such cooperative association shall itself issue, file and maintain open price schedules of the character and in the manner specified in Section 2 of Article VI of the Code, and provided further that such cooperative association shall abide by all of the price provisions applicable to procuders under said Article VI.

Rule 2. Any producer or importer of potash, phosphate rock or nitrogen carriers who does not sell to dealers and/or consumers may sell such products, or any of them, to any wholesale cooperative association (a cooperative association of the character described in sub-division a of Section 3 of Article VII) without thereby being deemed to be subject to any of the provisions of the Code.

Rule 6. The Secretary of the National Fertilizer Association with the advice and assistance of the Farm Credit Association, may from time to time prepare and issue a list of the names and addresses of Wholesale Cooperative Associations (cooperative associations of the character described in sub-division a of Article VII of the Code) operating in such zone or subdivision thereof and mail copy of such list to each such Wholesale Cooperative Association and to such producer operating in such zone or subdivision thereof.

Necessity for Rules

The necessity for the above rules was occasioned by the difficulty experienced by numerous cooperative farmers' organizations in purchasing raw materials from producers and importers. The disinclination

of such producers to sell to the cooperatives was due to the uncertainty as to whether in doing so the producers would place themselves in position where it would be necessary to file open price schedules in accordance with article VI, section 2 of the code. This uncertainty was due to the wording of Section 1-b of Article II which provided that:

> "In the event that any producer or importer of potash, phosphate rock, or nitrogen carriers makes no sale of mixed fertilizer, superphosphate or other fertilizer material to dealers and/or consumers, none of the provisions of this Code shall apply to such producer or importer."

The above rules disposed of the problem as regards those Cooperatives which definitely answered all requirements of Section 3-a of Article VII as to being "principally engaged in a bona fide wholesale business", but left considerable doubt in the minds of importers and producers of raw materials in determining in individual cases whether numerous cooperatives could so qualify. Rule 6 was designed to assist in removing this difficulty. The matter was one of considerable importance to the cooperatives, as failing to be able to purchase the raw materials from the producers direct, meant increased prices when they were forced to buy the materials from producers of mixed fertilizers.

No Question Raised Regarding Code Basis for Rule

Although there is some doubt as to the basis in the code for the provision in Rule 1, requiring cooperatives to file prices when purchasing raw materials direct from a producer, the record does not disclose that any cooperative protested this Rule or that any question was raised regarding it.

Quantity Discounts Made Mandatory

Included in the rules was the following:

> Rule 3. All schedules hereafter filed in compliance with the provisions of Section 2 of Article VI of the Code must provide for the allowance of suitable quantity discounts from the prices listed in said schedules to producers, dealers, agents and consumers in Section 1 of Article VI.

The above rule was considered desirable in order to lessen criticism which had been directed at the spread between dealer prices and those extended large consumers.(*) It had also been called to attention that it was the practice of producers to appoint many farmers as their agents. These farmers were fertilizer users, and in many cases

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(*) Correspondence. (In NRA Files, Fertilizer Industry Code, Complaints Folder.)

evidently disposed of only a few tons more than needed on their own farms to relatives and neighbors, securing an agent's discount on a relatively small aggregate purchase. There appeared, therefore, to be considerable justification in the protests of a number of large consumers who did not make an effort to become the appointed agents of producers but whose purchases for their own use were in greater quantities than others who were receiving the agents' discount. By making quantity discounts mandatory in filed schedules, the code authority evidently felt that the Rule was equitable, and would, in some measure, prove a solution to the above problem, and at the same time lessen the criticism being made of prices which producers had filed under the code.

Question of Code Basis for Quantity Discounts

It may be seriously questioned whether any provision in the code provided a basis for compelling a producer to allow quantity discounts in his filed schedule. The record, however, discloses no protest being made or question raised regarding the rule.

Authority to Issue Producer Lists

The following rules were designed to clarify the situation as regards the status of applicants who desired to be classified as producers under the code definition:

> Rule 4. The Secretary of the National Fertilizer Association, to assist producers in filing schedules with their competitors in compliance with the requirements of Section 2 of Article VI of the Code, may prepare and and issue from time to time a list of the names and addresses of producers operating in each zone, or subdivision thereof, and mail copy of such list to each producer."
>
> Rule 5. The Secretary of the National Fertilizer Association may require from such persons who wish to be included in such list of producers an affidavit or sworn statement declaring that they are producers (within the meaning of Section 12 of Article II of the Code) together with the facts pertinent thereto, and that they agree to comply with the provisions of the Code and all regulations issued thereunder, including specifically, but without limiting the generality of the foregoing, the labor provisions of Article IV, the price provisions of Article VI, the marketing provisions of Article VII, and the unfair practice provisions of Article VIII and the provisions as to fees and expenses in Article XI.

Problem to be Solved

It would seem that the code authority would have been within its authority without such a rule in furnishing lists of known producers

in each zone to assist the producers in mailing price schedules to competitors, as required in Sec. a-3 of Article VI of the code. However, the problem to be solved was to establish in a definite manner the status of entrants into the field of production and distribution of mixed fertilizers, so that raw material producers might have a guide in recognizing or declining to recognize an individual or firm claiming to be entitled to the prices extended producers of mixed fertilizers, especially claimants who were just entering the field. While all expressions made by the code authority regarding this matter were to the effect that the status of a producer and his recognition as such were dependent entirely on the facts surrounding each case, it is obvious from the record that prospective producers were able to purchase raw materials at producers' prices only when their names had been placed on the producer lists issued by the code authority.

Application Blank Prepared by Code Authority

Apparently using Rule 5 as authority, the code authority prepared an elaborate questionnaire (*) and application blank on which prospective producers were required to answer many questions regarding their proposed operations in order to establish their qualifications and have their names placed on the producer list of the code authority. In signing the application blank, the applicant agreed to abide by code provisions and to pay assessments for the maintenance of the code authority. The basis for the latter stipulation may be open to question inasmuch as Article XI of the code did not make payments of assessments mandatory on the part of industry members.

Approval of Rules by NRA

All of the above Rules were formally approved by NRA under date of February 6, 1934. (**)

Authority for Combined Purchases to Apply on Quantity Discounts

On June 3, 1934, the code authority requested approval of an addition to the "Rules and Regulations" as follows:

> "A producer's schedule may provide that in computing the amount of quantity discount to which any producer, dealer, agent or consumer is entitld, the combined tonnage sold to such producer, dealer, agent, or consumer by all producers doing business in the zone in each fertilizer season will be taken into considera-

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(*) A copy of the questionnaire is included in Appendix II and is labelled Exhibit 37.

(**) Administrative Order No. 67-3. (In NRA Files.)

tion, but no producer shall pay a quantity discount on any tonnage in excess of that actually sold by him to the producer, dealer, agent or consumer involved."

The need for this rule was that operation of Rule 3, previously discussed, had tended to encourage purchasers to confine their purchases to one producer in order to obtain the highest discount possible on quantity purchases. The new rule permitted the purchases from more than one producer to apply on the quantities to which discounts might be applied. The record, however, does not make clear the manner in which a producer determined the amount of purchases made by a customer from producers other than himself.

The above rule was submitted as an amendment or addition to the "Rules and Regulations", approved on February 6, 1934, and on June 29, 1934 NRA approval was extended to the rules as amended.(*)

Reporting of Distributors Made Mandatory

On October 3, 1934, the Code Authority requested approval of the following regulation relative to the reporting of distributors:

Section 1. Each producer shall, within five days after receipt of a written request authorized by the Administrative Committee, submit to the executive officer of the National Fertilizer Association, Washington, D.C., a complete list of the names and addresses of all individuals, partnerships, association, and/or corporations appointed or utilized, in any zone, for the distribution of fertilizer and/or fertilizer materials, by such producer, as salaried salesmen, commission traveling salesmen (in Florida only), or distributors - whether dealers or agents - each class to be shown separately.

Section 2. Each producer of whom such request has been made shall, without further request, within five days after such producer's said salaried salesmen, commission travelling salesmen (in Florida only), or distributors - whether dealers or agents - notify the executive officer of the National Fertilizer Association, Washington, D.C., of such change, elimination, or addition, in order that such list may be kept current.

Section 3. The Administrative Committee shall not authorize the executive office of the National Fertilizer Association to request such a list for any zone except upon the specific request of such zone.

Such a regulation as the above had been found desirable in several zones in order that responsibility for acts of an agent in cases of alleged violation of code provisions could be placed upon the producer

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(*) Administrative Order No. 67-29. (In NRA Files.)

or producers whom the agent represented, and in order to make a matter of record the names of individuals and firms who were receiving discounts extended agents and dealers.

Basis of Authorization and Objection Raised

In requesting approval of this regulation, the code authority used as a basis of authorization, Article IX of the Code which provides that the code authority may require reports from producers containing information necessary for administration and enforcement of the code.

The Research and Planning Division objected to the regulation on the grounds that the code did not provide for calssification of customers, and that a producer should not be required to divulge the names of customers. Other Advisory Boards offered no objections, and NRA approval was extended under date of October 24, 1933.(*)

(*) Administrative Order No. 67-36. (In NRA Files.)

CODE COMPLIANCE

Plan of Procedure

In accordance with a plan of procedure adopted by the code authority for handling complaints of alleged violation of trade practice provisions of the code, the zone executive committee in each zone acted as a local compliance committee of the code authority. In addition to these committees, a secretary was assigned to each zone whose principal duties were the investigation and handling of trade practice complaints.

These secretaries were carefully selected in the light of their qualifications for the work assigned. All had practical knowledge of the industry and its problems, and a majority had a background of legal training.

The procedure for routine handling of trade practice complaints has been previously described in this report under the caption, "Trade Practice Complaints Committee".

Cases Handled During First Active Season

The code became effective on November 10, 1933, and the industry entered into its heavy selling season in January, 1934. During the four months from January to May, inclusive, 227 cases of alleged violation of trade practice provisions were handled by the Code Authority and its agencies, a vast majority being adjusted by the zone committees.

During the remainder of 1934, 341 additional cases of alleged violation were filed, or a total of 568 during 1934.

Increase in Complaints during Second Season

During the months from January to May, 1933, 766 cases of alleged violation of trade practice provisions were filed, as compared with 227 during the same period in 1934.

With the exception of approximately one hundred cases in which action was pending at the time of the Schechter decision, the total of 1,334 cases had been followed to some conclusion (*).

(*) The above (and following) compilations were made from records of individual cases contained in the files of the National Fertilizer Association.

Complaints of Violation of Filed Prices Most Prevalent

Eleven hundred and forty-three, or 93% of the 1,234 cases disposed of by zone committees and the code authority involved alleged violation of Sec. 2 of Article VI, selling at prices, terms or conditions of sale other than those listed in open price schedules filed by the respondents. Several cases alleging sales at prices other than those filed by the respondents also involved possible violation of Section 1 of Article VI, "Sales Below Cost", but as the filed price schedules invariably provided a more definite basis for proof of violation, action was usually taken under Section 2 of Article VI.

Distribution of Other Complaints

The remaining 91 cases of alleged violation of code provisions were distributed as follows:

Article VIII,	Section 1 - Defamation of a Competitor	3
Article VIII,	Section 2 - Rebates and uncarned discounts	8
Article VIII,	Section 3 - Payment of Agents' and Dealers' discounts to others than Agents and Dealers	3
Article VIII,	Section 6 - Furnishing warehouse space without adequate charge for same	6
Article VIII,	Section 8 - Failure to enforce contracts	2
Article VIII,	Section 9 - Selling on time at cash prices	1
Article VIII,	Section 10 - Gratuities	12
Article VIII,	Section 11 - Employing a buyer as an agent	17
Article VIII,	Section 12 - Subterfuge in invoicing	3
Article VIII,	Section 13 - Refunding or retroactive settlement	1
Article VIII,	Section 14 - Guaranteeing prices against decline	10
Article VIII,	Section 15 - Inducing breach of contract	5
Article VIII,	Section 16 - False Marking and Branding	2
Article VIII,	Section 17 - False advertising	9
Article VIII,	Section 18 - Crop sharing	1
Article VII,	Section 1 - Selling unapproved grades	1
Article VII,	Section 2 - Employing commission salesmen	1
Article VI,	Section 1 - Sales below cost	3
Article IV,	Labor provisions	3
		91

Distribution of Complaints

The cases disposed of were divided among the various types of Industry members as follows:

Large	Medium	Small	Farmers Cooperatives	Raw Material Producers
397	274	482	57	24

Percentage of Cases in which Violation was Established

In 853 of the 1,234 cases disposed of, no violation was found; 268 cases in which violation was admitted by the respondent or established by a zone committee were adjusted by satisfactory promise of action on the part of the respondents to discontinue the practice complained of; 113 certificates of future compliance were signed by respondents who had been found guilty of violation.

Six hundred and fifty-four, or slightly more than 50 per cent of cases handled, were occasioned by alleged actions of agents of producers, rather than by direct actions of the producers or their salaried salesmen.

Difficulty in Establishing Violations

The high percentage of cases presented in which no violation was established was occasioned for the most part by the extreme difficulty complainants experienced in obtaining the evidence necessary to definitely establish a violation. To be sufficiently definite, such evidence, in most cases, would require that the purchaser furnish the details of a transaction in which he had been favored by a producer. As might be expected, a purchaser who had received a favor was not likely to be so ungrateful as to divulge the facts with the knowledge that to do so would create trouble for the producer who had extended favorable prices or terms.

Cases in Which Violation was Denied.

In many cases which were disposed of as having been "adjusted", the files contained complaints, apparently made in good faith, that transactions completed by producers or their agents had been made, in a manner not in accordance with schedules filed by the producers; in answer to the complaints, the charges would be emphatically denied by the producers, with assurances that the transactions had been in entire accordance with filed schedules; the complainants were then advised of these statements, and almost invariably were unable to furnish additional information of sufficiently definite nature to warrant further pressing the charges.

The review of individual cases indicated that in nearly all instances where an agent had apparently sold or offered to sell at variance with the prices or terms filed, the producer cooperated in correcting the situation, in some instances cancelling agent's contracts.

Cases not Based on Substantiated Facts

In a large number of the cases in which no violation was found, it seemed apparent that the charges had been filed on hearsay evidence, the respondents frequently establishing that they were in no manner involved in the transaction which had been questioned. Some of this confusion undoubtedly resulted from the fact that frequently the same agent represented as many as four or five producers.

Criticism of Compliance Efforts

While the tone of letters from the industry members in the files of the Deputy Administrator indicates that it was generally felt that operation of the code and the use of a system of open price filing had exerted a strong stabilizing influence in competitive conditions, the following quotation from a letter of a zone officer to the Executive Director is typical of expressions made by other producers who felt strongly that more drastic measures than securing certificates of compliance would be necessary if the code were to continue of value:

"All you do is tell us to take it up with the State Director. There is rapidly developing a feeling among producers in this Zone that nothing is going to be done about violations, and there is a feeling of 'don't you report me and I won't report you'. The feeling further seems to exist that there will be a certain amount of correspondence and the matter will be dropped and that the shrewd man will be able to get away with these kind of things.

"We are having a meeting of the Executive Committee the first of the week, and we should like to get things into shape to check the growing disregard for the Code. I am thoroughly convinced that unless some producers, both large and small, are brought up with a jerk that the whole thing is going to be of little value." (*)

Other letters from producers in the files of the Deputy Administrator express dissatisfaction with the handling of the comparatively few cases which the code authority found necessary to refer to NRA in that it was felt by these producers that removal of a Blue Eagle or signing a compliance certificate were not sufficiently severe penalties to stem the rising tide of alleged violations.

(*) Letter in Compliance Files of National Fertilizer Association.

Experience in Securing NRA Cooperation

In December, 1934, the code compliance structure in Southern California was seriously threatened by the apparently flagrant and defiant violation of the code by a producer in that district. Charges filed were promptly and efficiently handled by the Secretary and zone committee. After review by the central trade practice committee of the code authority, the case was referred back to the zone committee on February 8, 1935, to be submitted to the State Director of NRA.

As the activities of the respondent in the case had resulted in reprisals on the part of other producers, the zone secretary and members of the zone committee made the strongest possible effort to induce the State Director and legal officers of the State to institute court action to restrain the actions of the producer which appeared to be unquestionably in violation of the Code. In spite of these efforts, no such action had been taken up to the time of the discontinuance of the code. Details of this case are reported because of its importance to the industry and the feeling of producers in the zone that the chaotic conditions which existed there during the 1935 season could have been averted had effective action been promptly taken.

Reason for Large Number of Complaints

While the number of complaints which Zone Secretaries and Committees were called upon to handle is large in comparison with other industries with comparable volume of sales, this condition was undoubtedly due to the extremely large force of salesmen and agents engaged in intensive competition during an active selling season of short duration. Also entering into the situation is the fact that consumers had undoubtedly become accustomed in previous years to play one producer against another in securing the best possible prices and terms in a demoralized market, and it is natural that producers and their representatives found it difficult to abide by fixed price schedules in concluding sales with buyers who drove hard bargains and to whom the producers had made various inducements in the past to obtain their business.

Increasing Lack of Respect for Code

Especially during the first busy season under codal operation, it seems apparent that the code exerted a strong influence in stabilizing competitive conditions, and that prices filed by producers were generally well respected. In the 1935 season, it seems equally apparent that the code did not command the same respect as in 1934, a logical conclusion being that certain producers and their agents had gained the impression that even a proven violation would not bring any severe penalty.

Results of Compliance Efforts

As previously described in this report under the caption, "Trade Practice Complaints Committee", the code authority made every possible effort to provide adequate machinery for enforcement of the trade practice provisions of the code. The results, although severely criticized in some instances by industry members, may reasonably be considered fairly commensurate with the effort in that the price structure of industry products was generally maintained throughout two seasons, and, probably of greatest importance, producers were able to retain a margain of profit at the end of the season without being forced to make retroactive settlements with customers due to having guaranteed prices against decline, as had been the case in previous years.

Industry Evaluation of the Code

A succinct statement of the high esteem in which the fertilizer industry held their NRA code and a suggestion that without it the United States Government might have to take over the industry is contained in the following quotation:

> "Calling N.R.A. codes 'almost as important as the Code Napoleon,' Charles J. Brand, executive director of the Fertilizer Code Authority, said he could not 'conceive that American industry and government would scrap the vast amount of constructive effort they represent.'
>
> "He likewise attributed the rise in profits last year in that industry to the code system. Although there was a trade practice code in the industry since 1927, 'the N.R.A. gave us something we didn't have before: a degree of opportunity to see that the code was enforced.' If this is not continued, he said, the government will have to step in and run the industry." (*)

(*) Testimony of Charles J. Brand, Executive Secretary and Treasurer, The National Fertilizer Association, and Executive Director, Code Authority for the Fertilizer Industry, public hearing on price differentials, March 14, 1935, Press Memorandum No. 8, third day, Release 10466, p. 4

OFFICE OF NATIONAL RECOVERY ADMINISTRATION

DIVISION OF REVIEW

THE FERTILIZER INDUSTRY STUDY

VOLUME II - APPENDICES

By

Al F. O'Donnell

Industry Studies Section
March, 1936

OFFICE OF NATIONAL RECOVERY ADMINISTRATION

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WORK MATERIALS NO. 63

INDUSTRY STUDIES SECTION
March, 1936

APPENDIX I

METHODOLOGY USED IN WRITING THIS REPORT

and

OUTLINE OF PROPOSED FUTURE RESEARCH

Outline of the Industry Study

The initial approach to the Fertilizer Study was an analysis of the problems of the industry. Once these problems had been outlined, the industry was divided into its logical parts for the gathering of information. The main subdivisions under which it was proposed to gather information were called:

(1) Production
(2) Labor
(3) Distribution and Prices
(4) Finance
(5) Industry Cooperation and Government Relations
(6) Foreign Trade
(7) Special Problems

A detailed outline was then written setting forth in detail the type of material which it was hoped could be gathered under each of these sections. (*)

Personnel

The personnel for the carrying out of the assembling of this material was all requisitioned from the then existing NRA personnel. A copy of the organization chart and a description of the experience of the Unit Chief and of the Project Heads is included in Appendix II as Exhibit 38.

Sources of Information

The various men selected for this study were capable and had had experience in the type of work to which they were assigned. In spite of this, several weeks had to be spent in becoming familiar with the particular problems of the fertilizer industry. A field trip was undertaken to Baltimore to the plants of the Standard Wholesale and Phosphate Company, the American Agricultural Chemical Company and that of Baugh and Sons, Inc. so that a better appreciation might be secured of the processes and problems of the industry.

(*) A copy of this outline was published by the Division of Review as Work Outline No. 64, dated December 16, 1935, and is included in the Fertilizer Industry NRA Archives as Exhibit F.

The NRA files on the fertilizer industry were unusually complete and provided the main source of information for the material contained in this report. The National Fertilizer Association was most helpful in furnishing certain material which they had previously published. They also made available their file of compliance cases for our analysis. The chief executives of the National Fertilizer Association, including Mr. Charles J. Brand, Executive Secretary, Miss Josephine Feeley, Office Manager, Mr. F. S. Lodge, Chief of the Open Price Section of the Code Authority and Mr. John Moran, Cost Accountant, were good enough to meet with the author and answer certain questions concerning the industry's activities.

Dr. J. W. Turrentine, President, American Potash Institute, Inc. was very helpful in furnishing information concerning the potash industry.

The main source of information outside of the NRA files was obtained from various other governmental departments which had investigated and published materials pertaining to particular phases of the fertilizer industry. Prominent among these sources of information was the Department of Agriculture, the Federal Trade Commission, the Tariff Commission, the Department of Labor, the Department of Commerce and the Department of Justice.

Experiment stations in the various States cooperated in furnishing the Fertilizer Industry Study with copies of their most recent publications pertaining to fertilizer.

Need for Future Research

Future economic research in this industry should be directed along two lines, first, a thorough survey of the economic weaknesses of the industry as it is now constituted, and second, the improvement of the available statistics concerning the industry.

Size and Efficiency of Companies

A thorough survey should be undertaken of the efficiency of large versus small scale companies in this industry. One method of approaching this problem would be to have special tabulations made by the Treasury Department from the income tax records. The income records would be classified by companies according to the dollar value of their output, or in lieu of that, according to the total reported asset value of the corporation in a series of classifications which would indicate the relative profits of the various size companies. The Treasury Department could also prepare the financial statistics for a specified list of 10 or 15 each of small, medium and large size companies geographically diversified. These figures when correlated with the known existing economic conditions in particular years should shed considerable light on whether or not the existing industry structure of integration of control in the hands of a few companies is economically sound.

A careful analysis should be made of the existing plant locations with reference to the markets which they serve, particularly correlating the demand in what should logically be the market area for a particular plant with the alleged production capacity of the particular plant.

Duplication of production facilities by competing companies in a particular area in an uneconomic way should be studied. Merger possibilities should be considered as a potential means of eliminating excess duplicate or obsolete production capacity.

Distribution System

Industry leaders have stated in public print that the present system of distribution was both costly and inefficient. No real survey of distribution channels in this industry has ever been undertaken. The cooperation of certain of the larger companies should be obtained and a thorough study made of their particular distribution experience. In this connection the place of the farmers' cooperative organizations in fertilizer distribution and a critical analysis of any potential economies for the consumer in the expansion of such a method of distribution should be studied.

Intercorporate Relationships

A careful survey should be undertaken of the intercorporate relationships in the fertilizer industry. A study should be undertaken to determine to what extent fertilizer companies are diversifying their activities into other lines of chemical manufacturing and what the effect of such diversification will be on the consumer of fertilizer in the long run.

It would be especially significant to survey the degree to which so called fertilizer manufacturers control the phosphate rock production supply of the United States. Some five or six companies are alleged to dominate this situation. In this connection a determination should be made of why this industry continues to ship unground phosphate rock to widely scattered superphosphate plants, each of which has its own investment and grinding equipment. Such equipment under the present system is not utilized 25 to 50% of the time, whereas if the rock were ground at the phosphate rock mines, the equipment could be used much more efficiently.

A study should be made as to why the plant food content of phosphorous and potash products are not measured in terms of the elements phosphorous and potassium instead of a mythical phosphoric acid (P_2O_5) and potassium oxide (K_2O). There is no way of comparing the relative value of these different elements as plant foods since they perform different functions for the growing plant. However, comparisons now made lead casual observers to assume that the nitrogen is the most expensive element contained in fertilizers, while if measured on the comparative basis of the three elements it is probable that phosphorous would be the most expensive.

A further study should be undertaken in connection with the attitude of the various interested parties toward tariffs in fertilizer raw materials.

Concentrated Fertilizers

A careful survey should be undertaken to determine the potential relocation of superphosphate manufacture if some of the problems connected with the production and farmer acceptance of the higher superphosphates is successful. The experiments of the Tennessee Valley Authority with fertilizer deserve much more treatment that it has been possible to give them in this brief survey.

Reduction of Grades

If concentrated fertilizers achieve a more prominent position in fertilizer used, a marked reduction in the number of grades now sold would be automatically effected. Whether or not this comes to pass, the subject of reducing the number of grades offered for sale is one of vital importance to all parties interested in the fertilizer industry. No survey is available which makes any estimates of the savings which would be effected to the manufacturer and to the consumer by manufacturing and selling fewer grades of mixed fertilizer. The elimination of non-fertilizing compounds from fertilizer materials (Sodium chloride from potash and gypsum from superphosphate in excessive quantities for fertilizer purposes, are subjects of economic interest. Similarly the study of reducing the use of fillers in fertilizer is of economic interest to the farmer.

Seasonality

Since seasonality has been becoming more acute in the fertilizer industry, a survey should be undertaken to determine what has been done to offset this trend and what the possibilities along these lines are.

Credit

The source and cost of farm credit for purchasing fertilizer should be carefully studied. Logically, such work would involve a study of what is being done by such institutions as the Farm Credit Administration, Crop Producers' Loan Association and various credit unions sponsored by State governments.

Statistics

A careful study of retail prices actually paid by the farmer should be made. The only information available at the present time is that obtained by the Department of Agriculture in a questionnaire to dealers and the figure which they reported as charging farmers.

No accurate information is available as to the investment in this industry, let alone determining a basis for the evaluation of that investment. When figures of investment are used as they often are in connection with the industry, more specific details should be given as to exactly what is meant by investment.

Production Capacity

There is a need for production statistics of particular companies in this industry, both as to their tonnage produced and as to its dollar value.

Ambiguity arises in discussing production capacity of the industry. Standards should be set up and an accurate survey made of the true production capacity of the industry according to those standards.

Government Departmental Cooperation

Many governmental departments now assemble excellent information on particular segments of the fertilizer industry. The figures, however, being collected for various uses are not always comparable. There should be a central clearing house for this information and it could be published in a manner in which it could be more readily accessible and more serviceable to interested parties. There is really a need for a continuing study of the fertilizer industry which could continue to do the type of work which has been begun in this particular study. In the long run such work would be invaluable to the industry, to labor and to the consumer.

EXHIBIT 1

LOCATION OF FERTILIZER PLANTS, 1933, 1934 and 1935

	1933				1934				1935			
	A	B	C	Total	A	B	C	Total	A	B	C	Total
Alabama	8	9	53	70	6	8	39	53	6	8	41	55
Arizona							2	2			2	2
Arkansas	1	2	13	16	1	2	9	12	1	2	9	12
California	4	1	28	33	3	1	51	55	3	1	57	61
Colorado			1	1			1	1			1	1
Connecticut			9	9		1	9	10		1	8	9
Delaware			8	8			8	8			8	8
Florida	4	3	33	40	5	3	38	46	5	3	48	56
Georgia	17	20	120	157	17	18	124	159	17	18	148	183
Illinois	2	4	5	11	2	5	8	15	2	5	9	16
Indiana		7	8	15		7	8	15		7	11	18
Iowa	1		2	3	1		4	5	1		4	5
Kansas			4	4			5	5			5	5
Kentucky	1	2	6	9	1	2	6	9	1	2	7	10
Louisiana	4	2	9	15	5	1	8	14	5	1	8	14
Maine			12	12			14	14			15	15
Maryland	6	5	35	46	6	5	36	47	6	5	38	49
Massachusetts	2	1	7	10	2	1	6	9	2	1	6	9
Michigan	1	1	4	6	1	1	3	5	1	1	5	7
Minnesota			5	5			5	5			6	6
Mississippi	4	4	7	15	4	4	9	17	3	5	10	18
Missouri		1	7	8		1	4	5			3	3
Montana	1			1	1			1	1			1
Nebraska			3	3			3	3			3	3
New Jersey	2	1	18	21	2	1	19	22	2	1	23	26
New Mexico							1	1			1	1
New York	1	2	11	14	1	2	15	18	1	2	16	19
N. Carolina	12	7	65	84	10	7	72	89	10	7	73	90
Ohio	7	10	10	27	6	11	11	28	6	11	11	28
Oklahoma			1	1			1	1			1	1
Oregon			1	1			3	3			3	3
Pennsylvania	2	3	38	43	2	2	33	37	2	2	32	36
Rhode Island			1	1			1	1			1	1
S. Carolina	10	6	48	64	10	5	53	68	10	5	74	89
Tennessee	5	5	4	14	5	5	5	15	5	5	3	13
Texas	2	1	24	27	3		19	22	3		21	24
Vermont			1	1			1	1			1	1
Virginia	7	3	38	48	7	3	36	46	7	3	40	50
Washington			6	6			15	15			14	14
West Virginia			2	2			1	1			1	1
Wisconsin		1	6	7		1	6	7			5	5
Totals	104	101	653	858	101	97	692	890	100	96	772	968

637 Producers listed in 1933
672 Producers listed in 1934
743 Producers listed in 1935

Source: American Fertilizer Handbooks

A - Complete Plants, make Sulphuric Acid and Superphosphate
B - Make Superphosphate and purchase Sulphuric Acid
C - Purchase Superphosphate and mix Fertilizer Materials only

APPENDIX II

EXHIBIT 2

PRODUCTION CAPACITY OF THE FERTILIZER INDUSTRY

In discussions of the productive capacity of the Industry, its representatives stress the ability of existing plants to produce tonnage of both mixed fertilizer and superphosphate greatly in excess of the highest rate of consumption even in the peak years.

In its application for a Code, the National Fertilizer Association claimed capacity to produce annually fully 12,000,000 tons of mixed fertilizer as against sales of 8,163,870 tons in the peak year of 1930, and capacity to annually produce fully 10,000,000 tons of superphosphate, although consumption had never greatly exceeded 4,000,000 tons (*).

The basis for the computation of these figures was not supplied by the Code sponsors, and that such estimates are not made on entirely definite information is indicated by the fact that on November 5, 1935, the Executive Secretary of the National Fertilizer Association at a Hearing on the Labor Provisions of a Proposed Voluntary Agreement stated that "the capacity in the industry to produce mixed fertilizers has for many years been fully 13,000,000 tons" and "the superphosphate industry could produce 8,000,000 tons annually" (**).

In a conference with Mr. Charles J. Brand, (***) Mr. Brand stated that the method of determining capacity was essentially that which was used in 1930 when statements were received from each producer as to the quantities of the materials which could have been produced under normal working conditions in addition to the quantities which were actually produced. It was pointed out that in 1930 this meant a ten-hour day of one shift, plus an average of ten percent as many workers on a night shift, although in some instances the night shift might employ 20 percent as many workers as on the day shift.

The estimate productive capacity of most of the plants in the United States are listed in annual issues of The American Fertilizer Handbook. In an effort to ascertain the method by which production capacity is figured, th publisher of the Handbook was interviewed and said that the listed capacities are sometimes based on the tonnage a company normally sells, and at other times they indicate the maximum possible production of the plants

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(*) Fertilizer Industry Application for a NRA code, August 2, 1933, p. 12. (Copy in NRA Files)

(**) National Recovery Administration Hearing on Title A (Labor Provisions) of Proposed Voluntary Agreement for the Fertilizer Industry, November 5, 1935, p. 27. (Copy in NRA Files)

(***) Conference of Al F. O'Donnell, Unit Chief, Fertilizer Industry Study, with Mr. Charles J. Brand, Mr. John Moran, Mr. F.S. Lodge, Miss Josephine Feeley of the National Fertilizer Association, October 25, 1935.

if operated at capacity for a full twelve month period.(*)

It appears quite certain that if even a majority of existing plants operated for any considerable period prior to the active selling seasons, a substantial oversupply of mixed fertilizer could be produced. However, as with all seasonable merchandise, producers naturally limit their productive operations to as short a period as possible immediately prior to the time orders need to be shipped, and it has not been disclosed that the industry problem of over production has been caused by producers over-estimating demand and preparing large stocks of mixed goods in advance of the selling season.

In the matter of capacity to produce superphosphate, the situation is slightly different, as it is, of course, necessary for producers to prepare and store this material in varying quantities in anticipation of demand. From available data, it is not possible to definitely check the estimates of capacity to produce superphosphate, as, to do so, would require knowledge of the length of time individual plants are operated in advance of the selling season, and the extent of facilities of the plants to store phosphate rock as well as the finished product, superphosphate.

As over a period of years, superphosphate producers have known that the demand for fertilizers is approximately proportionate to farm income in the previous year, and as the National Fertilizer Association releases monthly reports (**) which show stocks of superphosphate on hand at the beginning and end of the month, and production and shipments during the month, producers have definite guides as to the extent to which they are warranted in producing the material in advance of a season, and undoubtedly operate their plants accordingly.

(*) Interview of Mr. Dexter Tutein with Mr. Albert Ware, Ware Brothers, Philadelphia, November 5, 1935.

(**) Application for a NRA Code, August 2, 1933, Page 30.

(A) INDUSTRIAL SUB-GROUP NO. 35 - FERTILIZERS, TANKAGE, ETC.

COMPARISON OF ASSETS, LIABILITIES, RECEIPTS, DEDUCTIONS, ETC.
(B) YEARS 1933 - 1926 INCLUSIVE

FROM RETURNS SHOWING "NET INCOME"

		1933	1932	1931	1930	1929	1928	1927	1926
1.	No. of returns submitting balance sheets	109	58	84	171	(N O T	A V A I L	A B L E)	
	ASSETS								
2.	Cash	7,800,996	966,359	2,413,368	6,417,300				(Not available)
3.	Notes and accounts receivable	11,292,768	5,721,197	9,010,375	28,636,618				
4.	Inventories	9,971,682	2,059,594	4,573,296	26,558,219				
5.	Investments, tax-exempt	826,975	23,496	94,112	1,606,935				
6.	Investments, other than tax-exempt	3,245,375	1,411,435	1,329,727	4,420,248				
7.	Capital assets, (less depreciation)	15,409,599	4,400,460	5,879,096	53,705,872				
8.	Miscellaneous assets	903,911	522,102	556,100	[illegible],099,908				
9.	TOTAL ASSETS - - - - - -	49,451,306	15,104,443	23,556,074	124,447,100				
	LIABILITIES								
10.	Notes and accounts payable	3,593,419	1,679,288	3,261,220	15,311,380				
11.	Bonded debt and mortgages	1,555,166	565,935	177,135	4,654,095				
12.	Miscellaneous liabilities	2,214,157	292,253	986,413	10,602,558				
13.	Capital stock - Preferred	2,552,450	246,700	1,224,700	10,009,900				
14.	Capital stock - Common	21,307,365	6,732,996	11,995,432	40,716,619				
15.	Surplus and undivided profits	18,098,604	6,148,145	6,386,087	43,743,758				
16.	Deficit	(169,855)	(560,574)	(174,916)	(591,210)				
17.	Surplus & undivid. profits, (less deficit)	17,928,749	5,587,571	6,211,171	43,152,548				
18.	TOTAL LIABILITIES - - - -	49,451,306	15,104,443	23,556,074	124,447,100				
	NUMBER OF RETURNS:								
19.	From which income data compiled.	110	59	91	177	211	206	165	
	Inactive returns, no data available	-0-	-0-	-0-	-0-	-0-	-0-	-0-	
	RECEIPTS. (taxable income)								
21.	Gross sales, (less returns & allowances)	42,425,916	13,419,008	20,337,540	109,591,505	169,726,141	187,042,419	84,320,964	
22.	Gross receipts from other operations	176,848	85,777	1,582,303	250,552	439,094	2,288,028	400,926	
23.	Interest	312,298	162,346	238,952	1,077,442	1,570,549	2,206,183	532,490	
24.	Rents	32,273	11,559	20,544	208,092	124,313	-0-	-0-	
25.	Profit from sale of capital assets	14,978	4,398	23,230	334,707	67,485	2,906,302	(Not segregated)	
26.	Miscellaneous receipts	340,739	142,223	190,305	489,275	1,018,606	2,187,605	985,130	
	RECEIPTS. (tax-exempt income)								
27.	Dividends from domestic corporations	133,901	27,730	11,979	485,292	460,974	465,506	75,405	
28.	Interest on tax-exempt obligations	38,023	1,447	567	83,462	71,441	72,841	8,993	
29.	TOTAL COMPILED RECEIPTS - -	43,474,976	13,854,488	22,905,420	112,520,657	173,478,603	197,146,[illegible]	86,323,906	
	STATUTORY DEDUCTIONS								
30.	Cost of goods sold	32,672,363	10,353,220	16,575,831	83,491,635	134,245,291	145,314,778	66,510,712	
31.	Compensation of officers	961,875	425,377	608,558	1,962,286	2,555,879	2,698,598	(Not shown)	
32.	Interest paid	297,524	120,482	239,162	1,551,584	1,869,963	3,243,185	1,040,540	
33.	Taxes paid, (other than income tax)	515,019	132,682	320,356	965,736	1,327,300	1,994,700	721,039	
34.	Bad debts	1,016,937	558,765	776,189	2,042,793	3,531,857	5,100,463	1,227,133	
35.	Depreciation	1,276,829	381,063	510,063	2,878,056	3,402,289	4,451,758	1,592,999	
36.	Depletion	1,606	7,098	-0-	446,507	363,461	459,857	19,062	
37.	Loss from sale of capital assets	171,511	22,124	27,626	110,493	(Not segregated)	(Not segregated)	(Not segregated)	
38.	Miscellaneous deductions	4,168,561	1,451,689	2,603,465	12,431,345	15,916,582	21,001,605	9,550,455	
39.	TOTAL STATUTORY DEDUCTIONS	41,082,225	13,452,500	21,861,550	105,880,435	163,212,222	184,264,947	80,661,940	
40.	Compiled net profit or deficit	2,392,751	401,988	1,043,870	6,940,222	10,266,381	12,903,937	5,661,964	
41.	Statutory net income or deficit	2,220,827	372,811	1,031,324	6,371,468	9,733,966	12,365,590	5,577,570	
42.	Net loss for prior year	-0-	39,841	35,203	126,543	304,742	3,082,393	596,212	
43.	Income tax	304,874	42,435	104,367	705,794	1,029,518	1,084,756	629,953	
44.	Compiled net profit, (less income tax)	2,087,877	359,553	939,503	6,234,428	9,241,863	11,819,181	5,032,015	
45.	Cash dividends paid	716,471	370,804	920,237	4,843,055	6,409,338	3,635,663	1,765,283	
46.	Stock dividends paid	45,000	-0-	19,400	1,247,750	60,000	281,092	56,396	

SOURCE: Tabulation sheets and published reports (Statistics of Income), of the Bureau of Internal Revenue, United States Treasury Department.

(A) The industrial classification is based on the predominant business of nonaffiliated corporations or of groups of affiliated corporations filing a single income tax return.

INDUSTRIAL SUB-GROUP NO. 35 CONSISTS OF THE FOLLOWING BUSINESS ACTIVITIES:
Fertilizers, Tankage, Etc.

(B) Period Covered: Returns filed for the calendar year, fiscal year ending prior to July 1st of the following year, and part year showing a greater number of months in the calendar year.

Figures in parentheses ( ) represent DEFICIT.

EXHIBIT 3.

(A) INDUSTRIAL SUB-GROUP NO. 35 - FERTILIZERS, TANKAGE, ETC.

COMPARISON OF ASSETS, LIABILITIES, RECEIPTS, DEDUCTIONS, ETC.
(B) YEARS 1933 - 1926 INCLUSIVE

FROM RETURNS SHOWING "NO NET INCOME"

	1933	1932	1931	1930	1929	1928	1927	1926
1. No. of returns submitting balance sheets	157	223	198	127	(N O T	A V A I L	A B L E)	(Included with Chemicals and allied substances)
ASSETS								
2. Cash	12,706,526	17,278,101	11,963,004	14,599,780				
3. Notes and accounts receivable	17,798,621	32,364,657	47,496,923	33,786,295				
4. Inventories	19,689,428	21,163,816	26,333,790	20,105,193				
5. Investments, tax-exempt	117,737	1,435,143	2,122,747	66,458				
6. Investments, other than tax-exempt	6,180,375	7,371,903	21,541,516	15,902,520				
7. Capital assets, (less depreciation)	67,270,215	83,070,232	105,559,359	69,605,357				
8. Miscellaneous assets	9,902,173	12,499,577	4,183,274	2,850,962				
9. TOTAL ASSETS - - - - - - -	133,665,075	175,186,450	219,800,613	156,916,528				
LIABILITIES								
10. Notes and accounts payable	8,148,914	14,301,772	24,525,554	18,898,344				
11. Bonded debt and mortgages	11,212,100	11,468,016	13,999,736	13,107,901				
12. Miscellaneous liabilities	10,251,497	11,431,215	20,071,098	10,493,287				
13. Capital stock - Preferred	54,453,228	57,661,096	40,993,295	65,806,855				
14. Capital stock - Common	28,496,444	45,705,987	63,540,393	75,757,001				
15. Surplus and undivided profits	30,759,044	43,132,372	63,945,138	21,186,649				
16. Deficit	(3,656,752)	(8,537,001)	(7,277,591)	(48,333,512)				
17. Surplus & undivided profits, (less deficit)	21,102,892	34,595,371	56,670,537	(27,146,863)				
18. TOTAL LIABILITIES - - - -	133,665,075	175,186,450	219,800,613	156,916,528				
NUMBER OF RETURNS:								
19. From which income data compiled.	165	235	217	137	94	88	103	
Inactive returns	36	15	14	16	18	15	10	
RECEIPTS, (taxable income)								
21. Gross sales, (less returns & allowances)	51,894,888	69,600,845	92,343,230	74,681,235	41,589,569	12,045,498	66,003,309	
22. Gross receipts from other operations	707,969	488,340	435,693	86,723	985,227	24,251	390,009	
23. Interest	451,437	1,000,956	1,939,672	1,516,178	677,547	95,583	1,161,371	
24. Rents	163,212	196,536	115,094	196,901	120,468	-0-	-0-	
25. Profit from sale of capital assets	109,284	14,097	22,939	5,979	1,367	98	(Not segregated)	
26. Miscellaneous receipts	424,605	699,517	1,263,322	943,344	146,496	271,137	1,946,617	
RECEIPTS, (tax-exempt income)								
27. Dividends from domestic corporations	229,665	176,875	454,166	501,734	12,664	20,619	292,985	
28. Interest on tax-exempt obligations	45,112	49,415	44,551	2,500	1,186	1,693	-0-	
29. TOTAL COMPILED RECEIPTS - -	54,026,172	72,226,581	96,621,667	77,934,594	43,534,524	12,458,870	69,794,291	
STATUTORY DEDUCTIONS								
30. Cost of goods sold	39,609,326	58,732,407	77,953,293	59,983,905	31,923,395	10,134,140	53,230,600	
31. Compensation of officers	802,511	1,534,790	2,091,294	1,326,370	705,698	377,673	Not shown.	
32. Interest paid	769,311	1,349,838	2,868,519	2,172,744	1,397,241	540,945	2,215,042	
33. Taxes paid, (other than income tax)	1,109,653	1,553,508	1,607,641	1,196,199	819,255	193,198	1,928,480	
34. Bad debts	3,959,891	2,501,518	2,844,855	2,957,905	2,201,000	534,099	2,536,226	
35. Depreciation	2,588,976	3,945,225	4,801,309	3,022,676	1,397,466	242,456	2,298,314	
36. Depletion	234,038	110,140	56,109	123,191	-0-	1,212	188,662	
37. Loss from sale of capital assets	526,706	440,892	751,998	547,417	(Not segregated)	(Not segregated)	(Not segregated)	
38. Miscellaneous deductions	6,987,863	10,474,921	15,343,529	11,568,762	6,653,789	2,351,335	14,207,042	
39. TOTAL STATUTORY DEDUCTIONS	58,588,305	80,643,279	108,318,547	82,899,169	45,100,866	14,375,012	76,604,566	
40. Compiled net profit or deficit	(4,562,133)	(8,416,658)	(11,696,880)	(4,964,575)	(1,566,342)	(1,914,333)	(6,810,275)	
41. Statutory net income or deficit	(4,836,910)	(8,642,044)	(12,195,597)	(5,468,509)	(1,589,192)	(1,938,448)	(7,103,260)	
42. Net loss for prior year	-0-	-0-	-0-	-0-	-0-	-0-	-0-	
43. Income tax	-0-	-0-	-0-	-0-	-0-	-0-	-0-	
44. Compiled net profit, (less income tax)	(4,562,133)	(8,416,658)	(11,096,880)	(4,964,575)	(1,566,342)	(1,916,133)	(6,810,275)	
45. Cash dividends paid	252,050	629,491	1,368,762	1,198,363	115,877	15,128	53,114	
46. Stock dividends paid	-0-	-0-	826	35,880	50,087	13,900	-0-	

SOURCE: Tabulation sheets and published reports (Statistics of Income), of the Bureau of Internal Revenue, United States Treasury Department.

(A) The industrial classification is based on the predominant business of nonaffiliated corporations or of groups of affiliated corporations filing a single income tax return.

INDUSTRIAL SUB-GROUP NO. 35 CONSISTS OF THE FOLLOWING BUSINESS ACTIVITIES:
Fertilizers, Tankage, Etc.

(B) Period Covered: Returns filed for the calendar year, fiscal year ending prior to July 1st of the following year, and part year showing a greater number of months in the calendar year.

Figures in parentheses ( ) represent DEFICIT.

EXHIBIT 3.

(A) INDUSTRIAL SUB-GROUP NO. 35 - FERTILIZERS, TANKAGE, ETC.

COMPARISON OF ASSETS, LIABILITIES, RECEIPTS, DEDUCTIONS, ETC.
(B) YEARS 1933 - 1926 INCLUSIVE

COMBINED FIGURES OF "NET INCOME" AND "NO NET INCOME"

		1933	1932	1931	1930	1929	1928	1927	1926
1.	No. of returns submitting balance sheets	266	281	282	300	(N O T	A V A I L	A B L E)	[illegible]
	ASSETS								
2.	Cash	20,507,522	18,244,460	14,376,372	21,017,040				
3.	Notes and accounts receivable	29,091,389	38,085,884	56,507,298	62,422,913				
4.	Inventories	29,661,110	23,223,210	30,907,086	46,663,412				
5.	Investments, tax-exempt	944,712	1,461,639	2,216,859	1,675,393				
6.	Investments, other than tax-exempt	5,425,750	6,763,338	22,571,243	20,322,768				
7.	Capital assets, (less depreciation)	82,679,814	87,470,692	111,438,455	123,311,229				
8.	Miscellaneous assets	10,806,084	13,021,679	5,339,374	5,950,870				
9.	TOTAL ASSETS - - - - - - -	183,116,381	190,290,902	243,656,687	281,363,625				
	LIABILITIES								
10.	Notes and accounts payable	12,042,333	15,981,060	27,786,774	34,209,724				
11.	Bonded debt and mortgages	12,767,266	12,053,953	14,176,574	17,761,996				
12.	Miscellaneous liabilities	12,465,654	11,723,468	21,057,511	21,095,845				
13.	Capital stock - Preferred	57,005,678	57,907,796	42,217,995	75,816,755				
14.	Capital stock - Common	49,803,809	52,441,983	75,535,825	116,473,620				
15.	Surplus and undivided profits	48,858,248	49,280,517	70,334,215	64,930,407				
16.	Deficit	(9,826,607)	(9,097,875)	(7,452,507)	(48,924,722)				
17.	Surplus & undivided profits, (less deficit)	39,031,641	40,182,642	62,881,708	16,005,685				
18.	TOTAL LIABILITIES - - - - -	183,116,381	190,290,902	243,656,687	281,363,625				
	NUMBER OF RETURNS:								
19.	From which income data compiled.	275	294	308	314	305	2[illegible]	266	
	Inactive returns,	36	15	14	16	18	15	10	
	RECEIPTS. (taxable income)								
21.	Gross sales, (less returns & allowances)	94,320,804	83,019,853	113,180,770	184,572,740	211,315,710	199,087,917	150,328,873	
22.	Gross receipts from other operations	884,817	574,117	8,017,996	337,605	1,424,321	2,318,273	790,935	
23.	Interest	763,735	1,163,302	2,178,624	2,593,620	2,246,096	2,301,766	1,633,061	
24.	Rents	195,465	208,095	138,638	404,993	244,721	—	—	
25.	Profit from sale of capital assets	124,262	18,495	46,169	340,686	66,052	6,906,400	(Not segregated)	
26.	Miscellaneous receipts	765,344	841,740	1,453,627	1,432,619	1,165,102	2,458,742	2,331,747	
	RECEIPTS. (tax-exempt income)								
27.	Dividends from domestic corporations	363,566	204,605	466,145	987,026	473,634	486,185	366,390	
28.	Interest on tax-exempt obligations	83,135	50,862	45,118	85,962	72,627	74,534	1,993	
29.	TOTAL COMPILED RECEIPTS - -	97,501,144	86,081,069	119,527,087	190,755,251	217,013,127	209,627,761	156,114,398	
	STATUTORY DEDUCTIONS								
30.	Cost of goods sold	72,281,689	69,085,687	94,529,124	143,475,540	166,168,686	199,446,518	119,741,512	
31.	Compensation of officers	1,764,386	1,960,167	8,700,152	3,280,656	3,264,177	3,076,871	(Not shown)	
32.	Interest paid	1,066,835	1,470,380	3,107,661	3,724,388	3,267,204	5,704,130	3,855,968	
33.	Taxes paid, (other than income tax)	1,624,702	1,686,190	1,927,997	2,161,935	2,146,555	2,187,852	2,449,519	
34.	Bad debts	4,976,828	3,060,283	3,621,044	5,000,698	5,732,057	5,634,562	3,763,359	
35.	Depreciation	3,865,805	4,326,288	5,311,372	5,900,732	4,799,777	4,644,214	3,852,343	
36.	Depletion	835,644	117,238	56,109	569,698	363,461	461,069	207,784	
37.	Loss from sale of capital assets	698,217	463,016	779,624	657,910	(Not segregated)	(Not segregated)	(Not segregated)	
38.	Miscellaneous deductions	13,156,424	11,926,610	12,146,994	24,000,107	22,570,371	21,332,931	21,717,547	
39.	TOTAL STATUTORY DEDUCTIONS	99,570,530	94,095,739	130,180,097	188,779,604	208,313,088	198,634,939	157,856,54[illegible]	
40.	Compiled net profit or deficit	(2,169,382)	(8,014,670)	(10,653,010)	1,975,647	8,700,039	10,987,826	(1,742,387)	
41.	Statutory net income or deficit	(2,616,083)	(8,270,137)	(11,164,273)	902,659	8,151,774	10,427,145	(1,525,680)	
42.	Net loss for prior year	—	39,881	35,203	126,583	304,742	3,082,313	356,218	
43.	Income tax	304,874	42,435	104,367	705,794	1,024,518	1,084,758	528,955	
44.	Compiled net profit, (less income tax)	(2,474,256)	(8,057,105)	(10,757,377)	1,269,853	7,675,521	9,903,068	(1,271,340)	
45.	Cash dividends paid	968,921	999,495	2,289,649	6,081,818	6,525,815	3,654,710	1,614,347	
46.	Stock dividends paid	45,000	—	20,826	1,281,630	110,087	254,958	94,344	

SOURCE: Tabulation sheets and published reports (Statistics of Income), of the Bureau of Internal Revenue, United States Treasury Department.

(A) The industrial classification is based on the predominant business of nonaffiliated corporations or of groups of affiliated corporations filing a single income tax return.

INDUSTRIAL SUB-GROUP NO. 35 CONSISTS OF THE FOLLOWING BUSINESS ACTIVITIES:
Fertilizers, Tankage, Etc.

(B) Period Covered: Returns filed for the calendar year, fiscal year ending prior to July 1st of the following year, and part year showing a greater number of months in the calendar year.

Figures in parentheses ( ) represent DEFICIT.

APPENDIX II

EXHIBIT 4

TWENTY POINTS CODE

The Twenty Points Code of Trade Practices as described in the Statement of Industry conditions made to the Court by William J. Donovan, Assistant to the Attorney General, filed December 21, 1926, filed in the District Court of the State of Maryland in the case of United States versus American Agricultural Chemical Company, et al.

"(1) Adopt a uniform cost accounting system,

"(2) Arrange for proper dissemination of costs to managers charged with distribution that they might market goods intelligently,

"(3) Discontinue hunting for car lot orders,

"(4) Eliminate commission travelers,

"To explain point 4 it may be said that commission salesmen had been accustomed to sacrifice part of their commissions to obtain sales by giving purchasers lower prices than their companies authorized,

"(5) Eliminate all direct sales agents, commission agents, salaried agents, etc.,

"(6) Reduce the number of salesmen and require each salesman to sell a certain amount of fertilizer,

"(7) Eliminate warehouses,

"(8) Provide a spread between sight draft bill of lading prices and time prices consistent with additional expenses and losses which accrued in connection with transacting time business,

"(9) Invoice goods at the price they were to be sold,

"(10) Discontinue selling chemicals and materials at low prices for the purpose of influencing the sale of other fertilizers, the purpose and effect of this point being to discourage dry and home mixing,

"(11)
"(A) Discontinue deliveries in manufacturers' trucks

"(B) Make no freight or other allowance for trucking or hauling in buyers' trucks or wagons,

"(C) Make price to agents or dealers or car lot buyers for goods loaded on buyers' trucks or wagons at factories the CAF price at factories plus an adequate charge for loading;

"(12) Enter into contracts with buyers in good faith and enforce contract terms on buyer,

"(13) Terms and discounts to be allowed,

"(14) Abolish custom of prepaying freight except to certain sections,

"(15), (16), and (17) Restrict number of brands upon the market,

"(18) Increase available phosphoric acid in various brands,

"(19) and (20) Use legitimate traveling salesmen only."

APPENDIX II

EXHIBIT 5

LIST OF THIRTY-NINE INDICTED COMPANIES

The thirty-nine companies sued by the United States Government for violating the anti-trust laws in 1926 were as follows:

American Agricultural Chemical Co.
Armour Fertilizer Works
Adair & McCarthy Bros. Inc.
Baugh & Sons Co. of Baltimore City
Caraleigh Phosphate & Fertilizer Works
The Carolinas Chemical Company
Central Chemical Co.
Cotton States Fertilizer Co.
Darling & Company
The Davison Chemical Co.
Eastern Cotton Oil Company
Empire State Chemical Co.
Etiwan Fertilizer Company
The Farmers Fertilizer Co.
Federal Chemical Company
Griffith & Boyd
The Hand Trading Company
International Agricultural Corp.
I. P. Thomas & Sons Company
Meridian Fertilizer Company
Mutual Fertilizer Company
McCabe Fertilizer Company
The Miller Fertilizer Co. of Baltimore City
G. Ober & Sons Company of Baltimore City
Planters Fertilizer & Phosphate Company
Charles M. Priddy & Company, Inc.
E. Raugh & Sons Fertilizer Company
Read Phosphate Company
Reliance Fertilizer Co.
F. S. Royster Guano Co.
The Summers Fertilizer Co.
The Smith Agricultural Chemical Co.
Southern Fertilizer & Chemical Co.
Swift and Company
F. W. Tunnell & Co., Inc.
Virginia-Carolina Chemical Co.
Welch Chemical Company
Wilson & Toomer Fertilizer Co.
Whichet Fertilizer Company

APPENDIX II

EXHIBIT 6

CODE OF TRADE PRACTICES OF THE FERTILIZER INDUSTRY.

Adopted January 10, 1927

THE CODE

The following Code has been formulated with a view to eliminating the waste and the unfair trade practices that have been prevalent in the fertilizer industry and that have led to demoralization, which is disastrous to the manufacturers and which in the long run cannot but also operate to the detriment of the consumers:

1. SOUND ACCOUNTING METHODS

Manufacturers should recognize the sound principle that in manufacturing and selling their product cost should be accurately determined and carefully considered. A scientific system of cost accounting should be established and applied in order that manufacturers may know accurately the cost of their product and the relation of price thereto. In this connection the attention of manufacturers is called to the cost accounting and cost estimating studies prepared by the Cost Accounting Committee of The National Fertilizer Association.

2. ELIMINATION OF WASTE

Wasteful selling methods should be eliminated. A multiplicity of grades adds materially to the cost of mixed fertilizers and, as pointed out by the Federal Trade Commission in its investigation of the fertilizer industry, there is no economic justification therefor. A reduction in the number of grades is therefore recommended as a measure of economy. It is further recommended that manufacturers avoid the practice of making up fertilizer (actually of standard grades) for sale under private brands, and also the practice of compounding special formulae for individual buyers.

Since freight rates constitute a material portion of the cost of fertilizer, it is recommended that manufacturers, who are primarily wholesalers, market their product in carload lots only, so as to avoid the large differential between carload and less-than-carload shipments.

3. NO SECRET DISCRIMINATIONS AND REBATES

Manufacturers should scrupulously avoid the granting of secret rebates, irrespective of the form they may assume. Competition should express itself openly rather than in special and discriminatory form. Among practices violative of this principle which have heretofore prevailed, and the elimination of which is recommended, are the following:

(a) Providing truck service without adequate charge for it, or reimbursing the dealer or purchaser for trucking costs.

(b) Providing local warehouse facilities or reimbursing the dealer or purchaser for the actual or theoretical cost thereof.

(c) The sale, simultaneously with the sale of mixed fertilizer, of chemicals and materials at special concessions designed to induce the buyer to purchase mixed fertilizer.

(d) Failure to enforce, in good faith, the terms of contracts previously made for the sale of fertilizer.

(e) Preparing special formulae or using special ingredients in standard formulae without making adequate charge for the cost of such formulae or special ingredients.

(f) The making of special allowances to buyers for advertising.

(g) Adopting selling methods which, as experience has amply demonstrated, nearly always promote secret rebates and concessions and put it out of the power of the manufacturers to control them. Reference is here particularly made to the practice of selling through commission agents and others who are irregularly employed and whose compensation, without being "loaded" into the price, is measured in terms of quantity sold. Where experience has shown that commission men and like agents customarily resort to split commissions, secret rebates, etc., manufacturers should sell only through regularly employed salaried salesmen and agents responsible to and directly controlled by the manufacturers.

(h) Extending credit terms that do not take into account the actual cost of money or of credit.

4. AVOIDANCE OF UNSOUND CREDIT TERMS

In certain sections of the country, buyers have customarily taken advantage of "open shipments" by receiving and using goods and then refusing to settle on any terms other than those satisfactory to themselves and often quite different from the terms under which the contract of purchase and sale was made. Where this abuse has prevailed, manufacturers should sell only on terms such that, to obtain the bill of lading, the purchasers must make payment in cash or negotiable promissory note for the contract price.

Where delivery is made against promissory note, the note should be made payable at the earliest date consistent with the principle that the fertilizer should be paid for not later than the time when the crop to which the fertilizer was applied is marketed.

5. NO GUARANTY AGAINST DECLINE OF PRICES

Sales should be made at fixed prices, and terms should be accepted in good faith by buyer and seller with the mutual intention of complete performance. Manufacturers should avoid selling under conditions that

provide for a reduction in the price of goods previously sold in the event of subsequent sales of like goods at lower prices.

The effect of this practice is to apply to all goods sold the lowest price which may be quoted by any competitor to any buyer, even though the price may be much below the cost of production. This puts the weaker manufacturers at the mercy of the stronger.

6. EXCHANGE OF STATISTICAL INFORMATION

In order that the relations of supply and demand and the statistical conditions existing from time to time in the fertilizer industry may be known, it is proposed to establish a Bureau of Statistics of The National Fertilizer Association, to which periodical statistical reports shall be made, giving information with respect to stocks on hand, production, shipments, average prices realized, and such other statistical information as may lawfully be assembled and exchanged, and which shall relate entirely to past and completed transactions.

Adopted by the Fertilizer Industry at a Special Convention held January 10, 1927, at Washington, D. C., under the Auspices of The National Fertilizer Association.

EXHIBIT 7

REVISED AND AMENDED
CODE OF TRADE PRACTICES OF THE
FERTILIZER INDUSTRY

December, 1929

There follows a complete copy of the Code. Part I includes the Trade Practice Conference Rules approved by the Federal Trade Commission. Part II includes the Voluntary Trade Practice Rules adopted by the signatory firms.

THE CODE

PART I

Certain rules covering the trade practices of the fertilizer industry having been submitted to the Federal Trade Commission and, after full hearing having been approved by the Commission and classified as Group I Rules under its Trade Practice Conference procedure, are hereby made a part of this Code, as follows:

TRADE PRACTICE CONFERENCE RULES
Approved by the Federal Trade Commission

GROUP I

Rule 1. SALES BELOW COST:

Resolved, that the sale or consignment of goods below cost for the purpose and with the intent of injuring a competitor and with the effect of lessening competition is an unfair trade practice.

Rule 2. REBATES:

Resolved, that the granting of secret rebates, irrespective of the form they may assume, constitutes unfair trade practices; and that the following practices, among others, violate this principle and therefore are unfair trade practices:

a. Billing of goods at prices which do not reflect actual returns to the seller or consignor.

b. Providing truck service without adequate charge for it, or reimbursing the dealer, purchaser, consignee or agent for the cost of trucking if reimbursement is not provided for in the manufacturers' price list.

c. Selling or consigning chemicals and materials with special concessions or at reduced prices, given to induce the buyer or consignee to purchase mixed fertilizer and/or other fertilizer materials.

d. Failure to enforce in good faith the terms of contracts previously made for the sale of fertilizer, for example:

1. Selling on terms that require the payment on sight draft on presentation of bill of lading (S.D.B.L.) and then waiving the obligation to pay cash before documents or goods are delivered, thus deferring the payment of the cash to some future date.

2. Selling and delivering goods on time, consignment or open bill of lading terms on S.D.B.L. price, or waiving earned interest.

e. Furnishing special containers, preparing special formulas for individual buyers or consignees, or using special ingredients in standard formulas, without adequate charge for the cost of such containers, formulas or special ingredients, as an inducement to the making of a contract and/or sale.

f. Making special allowances to buyers or consignees under the guise of advertising expense, or giving any other form of gratuity.

g. Adopting selling methods that promote secret rebates and concessions, such as:

1. Employing a buyer or consignee or his agent or anyone employed by or connected with a buyer or consignee with the purpose, design, or effect of influencing the business of such customer.

2. Carrying on books by seller or consignor, as delinquent, balances due by solvent customer, with no intention of requiring ultimate payment.

h. Enabling the purchaser or consignee to obtain fertilizer apparently on cash terms but in fact on credit extended to him by or through the manufacturer, as, for example: A transaction covered by a sight draft and bill of lading under which the purchaser or consignee is made to appear as honoring documents upon presentation by payment with his own funds, when in fact the cash involved was obtained in whole or in part upon a negotiable instrument (usually discounted at a bank) bearing the endorsement of the manufacturer; or a transaction by which the manufacturer, although he does not actually endorse the obligation, renders himself legally or morally responsible for its payment if the purchaser or consignee should fail to meet his obligation to the bank at maturity.

i. Refunding to the buyer or consignee, either directly or indirectly, any part of the purchase price on account of goods accepted and/or settled for by the buyer or consignee under the terms of the contract. This practice is commonly referred to as "retroactive settlement".

(Note by the Commission. Subdivisions a, b, c, d, e, f, g, h, and i are hereby interpreted as being controlled by the preceding clause relating to secret rebates and as specification of methods of secret rebating. With that interpretation these subdivisions are approved.)

Rule 3. DEFAMATION OF COMPETITOR OR DISPARAGEMENT OF HIS GOODS:

Resolved, that the defamation of a competitor in any manner, either by imputing to him dishonorable conduct, inability to perform contracts or questionable credit standing, or false disparagement of the grade or quality of his goods, is an unfair trade practice.

PART II

By the mutual agreement and acceptance of the signatories hereto, the following additional rules are formulated and adopted with a view to eliminating certain demonstrated wastes and unsound and detrimental trade practices prevalent in the Fertilizer Industry:

VOLUNTARY TRADE PRACTICE RULES
Accepted by the Signatories

Rule 1. REBATES:

a. The practice of granting rebates suppresses constructive economic competition, and by disturbing markets prevents orderly development of the industry. This works to the ultimate injury of manufacturer, dealer and consumer. When granted secretly rebates constitute unfair trade practices and as such are unlawful, as provided in Group I, Rule 2, which enunciates the general principle that the granting of secret rebates constitutes unfair trade practices and lists specific practices as violations of the principle.

b. All forms of rebating, and particularly those described in paragraphs b, c, f, g (1) and i of Group I, are unsound, even though they may be practiced openly, and should be avoided.

Rule 2. SOUND ACCOUNTING METHODS:

Manufacturers should maintain reliable systems of cost accounting in order that they may know accurately the cost of making and marketing each product and the relation of price to cost. In this connection the attention of manufacturers is called to the cost accounting and cost estimating studies prepared by the Cost Accounting Committee of the National Fertilizer Association.

Rule 3. ELIMINATION OF WASTE:

a. Wasteful methods of manufacture and marketing should be eliminated.

b. A reduction in the number of grades of fertilizer to the point of reasonably satisfying the needs of fertilizer consumers is recommended as a measure of economy. A multiplicity of grades adds to the cost of mixed fertilizers without economic justification, as pointed out by the Federal Trade Commission in its investigation of the fertilizer industry.

c. It is also recommended that manufacturers avoid the practice of making up fertilizer for sale under private brands by merchant dealers, and of preparing special formulas or using special ingredients in standard formulas without making adequate charge for the cost of such formulas or special ingredients.

d. Since freight rates constitute an appreciable part of the cost of fertilizer, it is recommended that manufacturers, in sofar as the requirements of their customers permit, market their product in carload lots only, so as to avoid the differential between carload and less than carload shipments and the uneconomic use of carrier equipment.

Rule 4. AVOIDANCE OF OTHER UNSOUND PRACTICES:

It is recommended that the following practices, which experience has shown to be unsound, be eliminated:

a. Reimbursing buyers or consignees, directly or indirectly, for actual or theoretical warehouse service or facilities.

b. Adopting selling methods which, as experience has amply demonstrated, nearly always promote secret rebates and concessions and put it out of the power of the manufacturers to control them. Reference is here particularly made to the practice of selling through commission agents and others who are irregularly employed and whose compensation, without being included in the price, is measured in terms of quantity sold. Where experience has shown that commission men and like agents customarily resort to split commissions, secret rebates, and similar practices, manufacturers should sell only through regularly employed salaried salesmen and agents responsible to and directly controlled by the manufacturer.

c. When shipments are made against documents, manufacturers should sell only on such terms that, to obtain the bill of lading, the purchaser must make payment upon delivery of goods in cash or make settlement by negotiable promissory note for the contract price. If the delivery is made against a promissory note, the note should be made payable at the earliest date consistent with the requirement that the fertilizer should be paid for not later than the time when the crop to which the fertilizer was applied is marketed.

d. Every purchase and sale transaction denotes a thing sold, a delivery, and a price to be paid and received. In order to be effective and enforceable, the transaction should be specific and definite as to each of its elements. While preserving and maintaining the privilege and the right from time to time in good faith to meet bona fide competition, manufacturers should avoid guaranteeing prices against declines. The effect of such a guaranty is that at the time the goods are shipped the manufacturer does not know the price he will eventually receive for them, and the account rendered is open to controversy and may be subject to settlement at the lowest price that may prevail during a season or that may be quoted to a buyer by a competitor who may be lacking in good faith. This places competitive buyers at a disadvantage and often results in discrimination between consumers.

Rule 5. INTERFERENCE WITH CONTRACTS:

Inducing or attempting to induce the breach of a contract between a competitor and his customer during the term of such contract is an unfair method of competition.

Rule 6. EXCHANGE OF STATISTICAL INFORMATION:

In order that the relations of supply and demand and the statistical conditions existing from time to time in the Fertilizer Industry may be known, The National Fertilizer Association has established an Economics Division to which periodical statistical reports are being made. These reports give information with respect to stocks on hand, production, shipments, average prices realized, and such other statistical information as may lawfully be assembled and exchanged. This information relates entirely to past and completed transactions. It is recommended that manufacturers cooperate with the Association in this work.

Competition should express itself openly and not in secret or discriminatory form. The Fertilizer Industry should serve American agriculture at the lowest cost commensurate with good service and reasonable profit. The foregoing rules have been made to preserve fair competition and to increase the efficiency and stability of the industry in the public interest. It is hoped, therefore, that dealers and consumers will cooperate with the manufacturers to achieve these purposes.

EXHIBIT 8

REVISED AND AMENDED TRADE PRACTICE
CONFERENCE RULES OF THE FERTILIZER INDUSTRY
August 4, 1931.

INTRODUCTORY STATEMENT

The rules approved by the Federal Trade Commission as a result of the industry's trade practice conference held January 29, 1929, were later revised by the Commission on its own motion. The revised rules were published by the Commission on August 4, 1931, and they represent the last Commission action in reference to the conference rules for the fertilizer industry. The revised rules are set forth below.

GROUP I.

Rule 1.

The Commission substituted and approved the following for Rule 1, Group I, as published June 12, 1929:

> The selling of goods below cost with the intent and with the effect of injuring a competitor and where the effect may be to substantially lessen competition or tend to create a monopoly or to unreasonably restrain trade, is an unfair trade practice.

Rule 2.

The Commission substituted and approved the following for Rule 3, Group I, as published June 12, 1929:

> A. The defamation of competitors by falsely imputing to them dishonorable conduct, inability to perform contracts, questionable credit standing, or by other false representations, or the false disparagement of the grade or quality of their goods, with the tendency and capacity to mislead or deceive purchasers or prospective purchasers, is an unfair trade practice.
>
> B. Withholding from or inserting in the invoice, statements which make the invoice a false record, wholly or in part, of the transaction represented on the face thereof, is condemned by the industry.

Rule 3.

The Commission substituted and approved the following for a part of Rule 2, Group I, as published June 12, 1929:

> The secret payment or allowance of rebates, refunds, commissions, or unearned discounts; whether in the form of money or otherwise, or secretly extending to certain purchasers special services or privileges, not extended to all purchasers

under like terms and conditions, with the intent and with the effect of injuring a competitor and where the effect may be to substantially lessen competition or tend to create a monopoly or to unreasonably restrain trade, is an unfair trade practice.

APPENDIX II

EXHIBIT 9

Letter Suggesting Abandonment of the Code.

Extract from a letter sent to members of the Executive Committee by the Secretary of the National Fertilizer Association.

"As you know, during the past two years little effort has been made to bring about observance of the Group (2) rules of the Code of Trade Practices of the Fertilizer Industry as promulgated in amended form by the Federal Trade Commission on May 29, 1931. These are published, together with a careful history of the whole matter, beginning on page 54 and concluding on page 61 of the proceedings of the seventh annual convention of the Association.

"You will recall that the Group (1) Rules are regarded a as enforceable by law. The industry's loss of interest in obtaining observance of the Group (2) Rules was due in part to the fact that after months of delay, the Federal Trade Commission in May, 1931, changed the form and to some extent the substance of the Code from the manner in which the industry prepared and adopted it. Group (2) Rules are intended to express the best opinions of the industry as to sound trade practices, but there is some doubt as to many of them being enforceable at law. So far as the Association has been concerned, the matter has been left to the individual initiative of each signatory company.

"At the Atlanta (1932) convention, because of chaotic conditions prevailing in the industry, a situation evident throughout the business structure of the country, certain companies notified the Board of Directors of the withdrawal of their acceptance of the Code. As a result of this action, Mr. Watson has suggested that all signatories be advised in a proper way that it has been deemed wise for the time being to suspend the operation of the Code, because in certain territories certain features of it are not being lived up to.

"I am in some doubt as to just what result would flow from advising signatories that operation of the Code is to be suspended. However, we are faced with the actual fact that for several years many, if not most, of the signatories have ceased to observe one or many of its requirements.

"A gesture to suspend the Code has a wide variety of legal implications. The Department of Justice, the Federal Trade Commission, and every competitor, whether he is a signatory or not, is concerned. I wish, therefore, that in every

possible case you would submit this matter to your counsel in order that any action we may take be well advised."

APPENDIX II

EXHIBIT 10

BY-LAWS

of

THE NATIONAL FERTILIZER ASSOCIATION
INCORPORATED

ARTICLE I - MEMBERSHIP

Se Section 1. The members of this Association shall consist of two classes, Active and Associate. All members of The National Fertilizer Association as of the date of the incorporation of this corporation shall be members of this corporation and shall retain the same status which they had as members of said unincorporated association; that is to say, an Active Member thereof shall be an Active Member of this corporation, and an Associate Member thereof shall be an Associate Member of this corporation. For the purpose of allocating the right to vote for Directors of the Association, the Active Members thereof shall be divided into twelve groups, which groups shall be designated District No. 1 to District No. 12, both inclusive. The twelve Districts shall include, respectively, those Active Members of the Association having their principal places of business located as follows, viz.:

District 1

Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut.

District 2

New York, Pennsylvania, New Jersey and Puerto Rico.

District 3

Maryland, Delaware, District of Columbia, Virginia north of James River and including Accomac and Northampton Counties, and the B. & O. Section of West Virginia.

District 4

North Carolina, Virginia south of James River and including Richmond, and the C. & O. Section of West Virginia.

District 5

South Carolina

District 6

Georgia, Florida starting with the eastern boundaries of Columbia, Suwanee, Lafayette, and Taylor Counties and extending west to the Apalachicola River.

District 7

Florida east and south of Suwanee, Columbia, Lafayette, and Taylor Counties.

District 8

Tennessee, Alabama, Mississippi, Florida west of the Apalachicola River, and Louisiana east of the Mississippi River.

District 9

Arkansas, Louisiana west of Mississippi River, Texas, Oklahoma and New Mexico.

District 10

Michigan, Ohio, Indiana, Kentucky, Illinois, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas Montana, Wyoming and Colorado.

District 11

Washington, Oregon, and Idaho.

District 12

California, Nevada, Utah, Arizona, and Hawaii.

The Board of Directors of the Association shall have the right from time to time to create new Districts out of territory included in existing Districts; and said Board of Directors shall have the right to change existing Districts by adding additional territory which may be taken from other Districts or by eliminating from any Districts territory then included therein.

Section 2. Active Membership. Any individual, firm or corporation engaged in the manufacture of fertilizer, or in the importation or production of fertilizer materials, shall be eligible to active membership in the Association. Each Active Member shall be entitled to one vote, subject to the exclusive right of Active Members from each District, except Districts 11 and 12, to elect two directors.

Section 3. Associate Membership. Any individual, firm or corporation engaged in the sale (not as a part of importation) of fertilizer materials, or in the manufacture or sale of fertilizer machinery, or fertilizer bags, or in negotiating sales of any of such commodities as broker, or in the business of making chemical analyses, or engaged in any business directly connected with the business of the fertilizer industry, but not such as to come within the requirements for active membership, shall be eligible to Associate Membership in this Association. Associate Members shall not be entitled to any vote; such Associate Members shall not be entitled to any vote; such Associate Members shall, however, be entitled to attend the meetings of the Association.

Section 4. Any member of the Association, whether Active or Associate, may be expelled from membership therein for non-payment of dues or for any conduct which in the opinion of the Board of Directors is prejudicial to the purposes, principles or interests of this Association, or for any other cause which said Board of Directors may, in its discretion, deem sufficient. Such expulsion shall be only by a two-thirds vote of the members of such Board present at a meetint thereof duly and regularly called and held for the purpose of taking such action, except that a member may be expelled for non-payment of dues by a majority vote of such members so present, and notice of such proposed action need not have been given in the call for the meeting. A member may not be expelled for any other cause unless such member shall have been given a reasonable opportunity to appear in person or by representative before the Board of Directors to answer the charges made against said member.

ARTICLE II - MEETING OF MEMBERS

Section 1. A stated or annual meeting of the members shall be held in each year on such day and at such place and time as the Board of Directors of the Corporation shall fix from time to time, at which meeting Directors consisting of Active Members of the Association or representatives of such Active Members as may be co-partnerships, firms or corporations, shall be elected to succeed the members of the Board of Directors whose terms then expire, and to fill any vacancies then existing. At such meeting there shall likewise be transacted any other business that may be then properly and legally presented.

Section. 2. A fall meeting of the members of the Association shall likewise be held annually at Atlanta, Georgia, in October or November of each year, on such date and at such time and at such place in Atlanta as said Board of Directors shall determine.

Section 3. Notice of the time and place of the annual meeting of the members of the Association and of the fall meeting to be held at Atlanta, Georgia, in October or November of each year, shall be mailed to the Active Members of the Association at least twenty days prior to the date fixed for such meetings, respectively, such notices to be mailed to all Members at their addresses as furnished by them to the Secretary of the Association.

Section 4. Special meetings of the members of the Association may be called by the President or by order of the Board of Directors at any time, and upon written request of twenty per cent of the Active Members

of the Association shall be called by the President, to be held at such time and place and for such time and place and for such purpose as the President or the Board of Directors or such written request, as the case may be, shall designate.

Section 5. Notice of the time, place and purpose of special meetings shall be mailed to the Active Members of the Association at least twenty days prior to the date fixed for such meetings, notices to be mailed as in Section 3 of this Article provided; but if a special meeting is called by the unanimous vote of the Directors present at a meeting, or by unanimous written consent of the Directors, then, if the Directors so order, only ten days' notice need be given.

Section 6. Meetings may be held without notice if all Active Members are present or if notice is waived by those not present.

Section 7. Those Active Members present in person or by proxy or other duly authorized representative shall constitute a quorum at all meetings of the Association.

Section 8. Except as otherwise provided by law, or in these By-Laws, action by the Active Members of the Association, in meeting duly assembled, shall be by the affirmative vote of a majority of such members present in person or by proxy.

Section 9. In voting for Directors or on any other proposed vote, the voting shall be by ballot upon the request of any five of the voting members.

Section 10. Any member entitled to vote at any meeting may do so by proxy duly appointed in writing, provided that such proxy shall not act at any meeting of the members of the Association which shall be held on a date which is more than three months subsequent to the date of the instrument naming such proxy, unless such instrument on its face provides that it shall be valid, for a longer period, such period being designated therein, provided, however, that attendance at a meeting by a member shall revoke the proxy given by such member and that any proxy shall be revoked upon the presentation of a proxy bearing a later date, whether or not the proxy bearing the earlier date is or is not on its face irrevocable.

ARTICLE III-DIRECTORS

Section 1. The business and affairs of this Association shall be managed by and under the direction of its Board of Directors of not less than thirty-three exclusive of ex-officio members, to be selected as hereinafter provided, each of whom shall be an Active Member of the Association or a representative of an Active Member. In case the President and/or Vice President and/or the retiring President are not members of the Board of Directors they shall be, ex-officio, added to the membership of such Board each year until the next annual meeting. The Directors by majority vote of the entire Board may increase the number of Directors to not more than sixty.

Section 2. Except as provided herein, there shall be two Directors for each District, elected by the members thereof, and one Director for each District, elected at large, as hereinafter in this article provided. The members of Districts 11 and 12 shall elect one Director each and the Members of the Association at the annual meeting shall elect two additional Directors-at-large to balance the representation of these Districts. When a new district is created, the Directors to be elected by the members of such newly created District shall forthwith be elected, and the other Director to be elected at large shall forthwith be elected, as hereinafter in this article provided, except that if such increase of Districts occurs prior to thirty days before an annual meeting, such Director-at-large shall be elected by the Board of Directors, as provided, in Section 7, to hold office until such annual meeting, at which time his successor shall be elected at large.

Section 3. The Directors shall be elected in the following manner: Directors from the Districts: Active Members of each District, by plurality vote of such members exclusively, shall have the right to elect two Directors, except Districts 11 and 12 each of which shall have the right to elect one Director. The remaining members of the Board of Directors, except ex-officio members, shall be known as Members-at-large and shall be elected by the Active Members, in annual meeting assembled, from those individuals nominated as follows:

The President of the Association shall appoint a Nominating Committee consisting of one representative from each District and one who is in his judgment a representative of the territory at large, which shall meet and report to the annual meeting the names of individuals whom they nominate for Members-at-large of the Board of Directors, at the rate of one nominee for each place to be filled annually; or in its discretion not to exceed two names more than the number of places to be filled. The Committee shall also place in nomination one name for each vacancy that may have occurred during the preceding year by reason of resignation, death, or otherwise of any Director-at-large whose regular term of office shall not have expired. Nothing in this section shall be construed to prevent any Active Member from voting for any other Active Member or Members not included on the ballot of said Nominating Committee for Members-at-large of the Board of Directors. That number of individuals corresponding to the places to be filled at the particular meeting, receiving the largest number of votes of the Active Members in such annual meeting assembled, shall be elected members at large of the Board of Directors. In case one or more candidates receive the same number of votes, then that one or those of such candidates requisite to complete the election shall be selected by lot from among those receiving the same number of votes..

Section 4. Directors (other than ex-officio Directors as hereinbefore provided) shall be divided into three classes and shall be elected for a term of three years from and after an annual meeting, succeeding the Directors whose terms expire, provided that if the number of Directors be increased, the new Directors shall be divided by the Board of Directors then in office among the three classes so that the number in each class shall be as nearly equal as may be; the term of one class expiring at the next annual meeting; the term of the second class expiring at one year after the next annual meeting; and the term of the third class expiring

two years after the next annual meeting. As and when Directors are elected as successors to such Directors, their terms shall be three years. The successor of a Director elected by each District shall be selected in the same manner as the retiring Director was elected, and likewise a Director succeeding a Director elected by the Active Members of the Association at large shall be chosen by vote of such Active Members.

Section 5. One-third of the total number of Directors shall constitute a quorum at all meetings of said Board of Directors; but if there be no such quorum the members present may adjourn the meeting from time to time. At all meetings of the Board of Directors duly convened, action of such Board shall be by affirmative vote of a majority of the members present, except as otherwise in these By-Laws provided.

Section 6. No member of the Association shall be permitted to have more than two individuals who are representatives of such member on the Board of Directors at any one time. This limitation shall not apply to ex-officio members. For purposes of representation on the Board of Directors controlling, subsidiary and affiliated companies shall be considered one member.

Section 7. In the event of a vacancy in Directors-at-large on the Board of Directors, it shall be filled by the remaining Directors in office by a majority vote. In the event of an increase in the number of Districts prior to thirty days before an annual meeting, the Directors-at-large to be elected pursuant to Section 2 of this Article shall be elected by the Directors in office by a majority vote.

Any Director so elected shall hold office until the next annual meeting of the Association, when a successor chosen in accordance with pertinent provisions of this Article shall be elected for the remainder of the unexpired term. In the event of a vacancy in Directors elected by the members of Districts on the Board of Directors, it shall be filled by election by the members of the District in question for the remainder of the unexpired term.

ARTICLE IV - COMMITTEES

District and Other Committees

Section 1. The President, subject to the approval of the Board of Directors, shall from time to time designate a committee for each of the Districts; these committees shall be known as "District Committees", and each member thereof shall be an Active Member of the Association or a representative of an Active Member.

Section 2. The District Committees shall have no power to bind the Association unless expressly authorized so to do by resolution of the Board of Directors, which resolution shall designate in detail the manner in which the Association elects to be bound by the action of such District Committee or District Committees. It shall be the duty and function of the District Committee --

a. To secure new members for the Association;
b. To keep informed as to Legislation affecting the fertilizer industry or any part of it, or in which such industry or any part of it may be interested;
c. To keep informed as to the work of agricultural experiment stations within the District;
d. To cooperate with dealers, consumers and any others interested in the elimination of unnecessary grades for use in the District.

Such Committee shall keep minutes of meetings held by it, of which copies shall be mailed to the Secretary of the Association promptly after such meetings; each such Committee shall likewise report to the Association annually the result of its activities, and from time to time to the Board of Directors.

Section 3. All committees, unless otherwise provided in the By-Laws, shall be appointed by the President as soon as practicable after the annual business meeting of the Association.

Section 4. All appointments to membership on committees shall be for the period between the annual conventions of the Association, except when they involve the filling of a vacancy, in which case they shall be for the remainder of the unexpired term of the previous incumbent or until a successor has been appointed.

Section 5. The President, the Vice-President, and the Executive Secretary and Treasurer shall be members ex-officio of all standing committees. The President shall be an ex-officio member of all special committees.

Section 6. All committees shall keep suitable records of their proceedings, of which copies shall be filed promptly, by mail or otherwise, after each meeting, in the executive office of the Association.

Section 7. Each Committee shall report to the Association annually the result of its activities, and at such other times as the Board of Directors or the proper officers of the Association may prescribe.

Section 8. The Secretary of the Association shall be secretary of each standing and special committee, except when the Board of Directors, in creating the committee, otherwise provides. He is authorized to designate an alternate to act for him when he is unable to attend the meetings of any committee.

Standing Committeess

Section 9. Executive Committee. The President, subject to the approval of the Board of Directors, shall appoint, from among the Directors, an Executive Committee of not more than nine members, which shall in the intervals between meetings of the Board, have and exercise the powers of the Board in the managment of the business and affairs of the Association. Five members of the Committee shall constitute a quorum for the transaction of business. When unable to attend a meeting a member of the Executive Committee may designate an alternate.

Section 10. Soil Improvement Committee. Subject to the approval of the Board of Directors, the President may appoint a Soil Improvement Committee of not more than seventeen members. The Committee shall elect a Chairman from among those of its members who are also members of the Board of Directors. It shall be the duty of the Committee to formulate policies and plans intended to increase the use of fertilizer by collecting and disseminating to farmers, to federal, state and local agricultural workers, and to the members of the fertilizer industry useful knowledge of all problems relating to soil fertility. The Executive Secretary shall supervise the execution of the plans and policies adopted by the Soil Improvement Committee.

Section 11. Public Relations Committee. Exclusive of ex-officio members, this Committee shall consist of a Chairman and not more than ten members, appointed by the President with the approval of the Board of Directors. It shall be the duty of the Committee to advise the Board of Directors and the officers of the Association on questions of national policy affecting the fertilizer industry and to perform such additional duties as the Board of Directors may from time to time assign to it.

Section 12. Cost Accounting Committee. This committee shall consist of a Chairman and not more than ten additional members, appointed by the President. It shall be the duty of the committee, when called upon, to assist in formulating and applying scientific systems of cost accounting in the fertilizer industry, in order that its members may know accurately the cost of their products and the relation of price thereto; it shall perform such other duties as may be imposed upon it from time to time.

Section 13. Insurance Committee. This committee shall consist of a Chairman and not more than four additional members appointed by the President. Its duties shall be the consideration and safeguarding of the interests of members in their relations with insurance companies, and the giving of such information and other services in connection therewith as may be proper and practicable.

Section 14. Traffic Committee. This committee shall be composed of not more than thirteen members, one of whom shall be designated by the President of the Association to act as Chairman. Under the direction of the Board of Directors, acting through the executive officers of the Association, it shall serve the Association in all exclusively mutual matters relating to freight rates, traffic regulations and transportation generally.

Section 15. Chemical Control Committee. This committee shall be composed of not to exceed eight members known to be competent in the chemistry and technology of the fertilizer industry. It shall be appointed by the President, who shall designate one of its members as Chairman. It shall be the duty of the committee to recommend for adoption proper methods of analysis and chemical control; to cooperate with the properly authorized officers of the several states in bringing about uniform and constructive enforcement of the fertilizer laws of the several states; to advise and assist in the preparation or revision of those features of state laws relating to composition, analysis and sampling, and to perform such other services in the field of fertilizer chemistry and technology as may be required.

Section 16. Fertilizer Recovery Committee. There shall be a standing committee to be known as the Fertilizer Recovery Committee, composed of not less than twelve members, selected as provided in this Section, and such members ex-officio as these By-Laws may provide

Members, except members ex-officio, shall be selected by the active members of the Association at the annual meeting of the members to serve until the next annual meeting of the members, provided:

That there shall be at least one member from each district, and not more than five members from any one district, but the Executive Secretary shall not be considered as from a district, and provided further:

That members shall be chosen with due regard for the interest of

Small producers,
Medium producers,
Large producers, and

Local producers,
Regional producers,
National producers, and

Producers of mixed fertilizer,
Producers of superphosphate,
Producers of fertilizer materials,

and any other classes of producers which conditions in the industry may warrant, and provided further:

That, excluding members ex-officio, not more than two members shall be connected with the same producer.

Nominations of person for membership shall be made by the Board of Directors. Additional nominations may be made by motion, duly seconded, and carried.

Election shall be by a plurality of the votes cast.

Should any vacancy occur subsequently to the Fall meeting, it shall be filled, for the unexpired portion of the term of the previous incumbent, by the Executive Committee of the Board of Directors. Should a vacancy occur prior to the Fall meeting, such vacancy shall be filled by the Executive Committee of the Board of Directors, but the member so selected shall serve until the Fall meeting. At the Fall meeting the active members shall elect persons to fill vacancies in the manner above provided for elections, to serve for the unexpired portion of the term of the original incumbents.

Such committee shall have power to elect a chairman from among its own members and to designate the number of members which shall constitute a quorum from the transaction of business. Such committee may further delegate its powers, to such extent as it may determine, to one or more

sub-committees of its own members which it may appoint.

Such committee shall have authority to represent the Association in all matters relating to the National Industrial Recovery Act, or to any law enacted or proposed for enactment in lieu thereof or by way of amendment thereto, and shall have authority to employ such persons as they may deem necessary to effectuate such purpose, provided that no expenditures, shall be made by such committee in excess of amounts provided for such purpose in the budget authorized by the Association, unless approved by the Board of Directors.

Section 17. The Board of Directors may from time to time, by resolution, create such additional standing or special committees as it may deem requisite and prescribe their duties.

ARTICLE V - MEETINGS OF THE BOARD OF DIRECTORS

Section 1. The annual meeting of the Board of Directors shall be held immediately following the adjournment of the annual meeting of the Association, and such meeting may be held without notice. At such meeting, the Board of Directors shall elect the officers of the Association for the ensuing year.

Section 2. Special meetings of the Board of Directors may be called by the President, and upon the written request of ten members of the Board, shall be called by the President, to be held at such time at such place and for such purpose as shall be determined by the President or stated in such written request.

Section 3. Notice of the time, place and purpose of special meetings shall be given to the members of the Board by telegraphic or written notice sent or mailed not less than five days prior to the date fixed for such meeting.

ARTICLE VI - OFFICERS

Section 1. The officers of the Association shall consist of a President, a Vice-President, a Secretary, and a Treasurer, and such other officers as the Board of Directors may from time to time determine. Officers shall be elected by the Board of Directors at its annual meeting and shall hold office for one year or until their successors shall have been chosen and shall have accepted office. The same person may hold the Office of Secretary and Treasurer.

Section 2. The Board of Directors shall have power to remove from office at any time, with or without cause, any officer of the Association, and to fill any vacancy which may occur through death resignation or otherwise.

Section 3. President It shall be the duty of the President to preside at all meetings of the Association and of the Board of Directors, and he shall be ex-officio member of each standing and special committee. Immediately after his election by the Board of Directors, except as otherwise provided in these By-Laws, he shall appoint, subject to the

approval of the Board of Directors, the members of the various standing committees which have been created as hereinbefore provided. He is empowered to appoint, in addition, such special committees as he may deem necessary from time to time.

Section 4. Vice-President. In the absence of the President, or in case of his inability to act, the Vice-President shall have and exercise all the powers of the President, and he shall also be ex-officio a member of each standing committee. In the event of the absence or inability to act of the President and Vice-President, the Board of Directors shall select a Chairman, who shall act as President pro tempore.

Section 5. Secretary. It shall be the duty of the Secretary to make and keep all records of the Association; to notify the members of the annual meeting and of all special meetings; to notify the Board of Directors of meetings, and to perform such other duties as may be delegated to him from time to time by the President or by the Board of Directors.

In the discretion of the Board of Directors, the Secretary may be designated the Executive Secretary. In this event, he shall be an ex-officio member of standing committees, and, in order to insure economy and uniformity of purpose, recommendations of proposed measures, projects and expenditures arising from such committees shall be prepared by him for presentation to the Board of Directors, by committee chairman or otherwise, as the President may direct. The Executive Secretary shall devote his time and effort to promoting the objects of the Association, managing its affairs and extending its membership and influence. He shall keep in close touch with all the activities of the Association and shall inform the members regarding matters of interest to them. He shall have authority to employ and remove, subject to the approval of the president, the employees of the executive department, and the employment or removal of other employees shall be subject to his approval. He shall have charge of the offices and property of the Association and shall be subject to the direction of the President and the Board of Directors.

Should the Association have an Assistant Secretary that officer shall perform such duties as may be delegated to him from time to time by the Board of Directors or the Secretary.

The Secretary and the Assistant Secretary shall respectively be compensated for their services and be reimbursed for such expenses as may be approved by the Board of Directors.

Section 6. Treasurer. The Treasurer shall collect and have the custody and control of all the moneys of the Association and shall keep an accurate account of all the moneys received and paid out on account of the Association, which account shall be at all times open to the inspection of the Board of Directors. He shall render a report in writing of his receipts and disbursements at each annual meeting of the Association or at such other time as the President may direct.

For the faithful discharge of his duties, the Treasurer shall furnish an indemnity bond in such sum as the Board of Directors may prescribed, the cost thereof to be paid by the Association.

ARTICLE VII - DUES

Section 1. Funds for financing the Association are to be provided from the dues to be assessed upon and paid by the Active and Associate Members and from such contributions from members and non-members as may be received by the Association with the approval of the Board of Directors Such funds are to be used for paying the general expenses of the Association and of such activities as may be determined upon from time to tine by the Board of Directors.

Section 2. The annual dues to be assessed upon and paid by the Active Members shall be assessed in each year by the Board of Directors, such assessment to be made by apportioning the amount of the budget of the Association for the coming fiscal year, approved as hereinafter provided, among the Active Members of the Association in such manner as the Board of Directors in its discretion may from time to time determine having due regard to the tonnage of fertilizer and/or fertilizer materials sold, and/or consigned and shipped by the respective Active Members in the last fiscal year for fertilizer uses and applying such relative rates per ton for bagged fertilizer, for bulk superphosphate, and/or fertilizer materials, as the Board of Directors in its discretion may consider proper. The budget upon which the assessment of dues shall be based shall be the budget which is approved by the vote of the Active Members of the Association in annual meeting assembled. The proposed budget shall be prepared by a special committee appointed for the purpose from time to time by the President, which proposed budget as approved by the Board of Directors shall be submitted to the Association at its annual meeting for action.

Section 3. The annual dues to be assessed upon and paid by Associate Members shall be in such amount as shall be assessed in each year by the Board of Directors and approved by a vote of the Active Members of the Association in annual meeting assembled.

Section 4. All dues shall be payable in equal quarterly instalments in each year, the first payment to be due on August 1 of each fiscal year. Subsequent instalments shall be due and payable as of the first day of each quarter, beginning October 1.

Section 5. Any member who shall fail to pay his dues within sixty (60) days after notification by the Treasurer that he is in arrears shall be reported promptly by the Treasurer to the Board of Directors for action.

Section 6. The fiscal year of the Association shall commence on July 1 and end on June 30 of the following year.

ARTICLE VIII - APPLICATIONS FOR MEMBERSHIP AND RESIGNATIONS

Section 1. Any individual, firm or corporation eligible for active or associate membership in the Association as provided in Section 2 and 3

of Article I of these By-Laws, shall be admitted to membership in the Association upon filing with the Secretary an appropriate form of application showing such eligibility.

Section 2. Any member may resign from the Association within thirty days after adjournment of the annual meeting by submitting a written notice of resignation, provided that such member's dues have been paid to the end of the expiring fiscal year. Any member may resign at any other time upon filing with the Secretary written notice of resignation, but such member shall be obligated to pay the dues assessed for the then current fiscal year.

Section 3. All resignations must be filed with the Secretary and by him referred to the Board of Directors.

ARTICLE IX - OFFICES

The principal corporate office of the Association, as required by law, shall be at such place in the State of Maryland as the Board of Directors shall from time to time designate, and the Association may have such other offices as said Board may determine from time to time. The executive office of the Association shall be located in the City of Washington, District of Columbia.

ARTICLE X - DISSOLUTION

This Association may be dissolved in any manner provided by the laws of the State of Maryland, but only upon the affirmative vote of two-thirds of all of the active members, at any meeting duly convened and held, and called for the purpose.

The assets of the Association remaining after the payment and discharge of all debts and liabilities of the Association shall, in the event of dissolution, be distributed to the members of the Association, both Active and Associate, and to non-members of the Association, and to non-member contributors, in proportion to the relative amounts of their respective contributions, by way of dues or otherwise, to the funds of the Association during the three fiscal years next preceding the year in which dissolution is effective.

Whenever dissolution is authorized the proportion of the dues or contributions covering the period of the then current quarter which has already expired shall become immediately due and payable, and if not paid within 30 days after the date of the authorization of dissolution shall, together with any dues or contributions previously in arrears and remaining unpaid, be offset against the share of the distribution to which such member or contributor would be entitled otherwise. If, however, any unpaid dues or contributions shall be paid within thirty days after the authorization of dissolution, the amount of such payment shall be added to the total amount used as a basis for calculation of the share of each member or contributor in the assets of the Association.

The Board of Directors at the time dissolution is authorized as aforesaid shall determine, subject to the approval of the court in case dissolution is by court proceedings, the exact amount distributable in dissolution to the members according to the foregoing provisions, and shall likewise determine all questions of fact which may arise in connection with the computation of the respective interests of the several members of the Association.

ARTICLE XI - ORDER OF BUSINESS

At all corporate meetings of this Association the order of business shall be as follows:

1. Call to order.
2. Roll call.
3. Reading of minutes of previous meeting.
4. Opening addresses.
5. Reports of officers.
6. Report of the Nominating Committee
7. Report of the Budget Committee
8. Report of other committees.
9. Unfinished business.
10. New business.
11. Election of the Board of Directors.
12. Adjournment.

ARTICLE XII - AMENDMENTS

The Board of Directors shall have the power to make, alter and repeal additional and supplementary By-Laws not inconsistent with any of the By-Laws adopted by the Active Members, at any meeting of the Board of Directors by a majority vote of the members present, provided notice of the proposed change was given in the notice of meeting or waived, and the By-Laws of the Association, including those made by the Board of Directors, may be altered, amended or repealed at any meeting of the Active Members of the Association by vote of a majority of such members present, provided notice of the proposed change was given in the notice of the meeting or waived.

ARTICLE XIII - MISCELLANEOUS

When questions arise upon which, in the judgment of the Board of Directors or of any of the Committees, as the case may be, the sentiment of the members of the Association would be helpful to the Board or to the Committee, such questions may, by direction of the President, be submitted by mail to the voting members of the Association, and the answers of such members may then be received and tabulated by the Executive Secretary and the results thereof furnished to the Board or to the Committee, as the case may be; provided, that no approval, consent, or other response so obtained shall be deemed to be a vote of the members having any legal force or effect with respect to action which would or may by law be taken by the members of the Association.

ARTICLE XIV - CONFORMANCE WITH NATIONAL INDUSTRY RECOVERY ACT

The By-Laws of the Association are hereby amended in every respect to such extent as may be necessary to conform to the National Industrial Recovery Act and to the provisions of the Code of Fair Competition for the Fertilizer Industry and the rules provided thereunder, and all provisions of the By-Laws not in conflict therewith shall remain in full effect.

APPENDIX II

EXHIBIT 11

CODE OF FAIR COMPETITION FOR THE FERTILIZER INDUSTRY

(Adopted in accordance with the resolution adopted by the Convention and subject to revision by the Fertilizer Recovery Committee and the National Recovery Administration)

ARTICLE I. PURPOSE

This Code is set up for the purpose of increasing employment, establishing fair and adequate wages, effecting necessary reduction of hours, improving standards of labor, and eliminating unfair trade practices, to the end of rehabilitating the Fertilizer Industry and enabling it to do its part toward establishing that balance of industries which is necessary to the restoration and maintenance of the highest practical degree of public welfare.

It is the declared purpose of the Fertilizer Industry and adherents to this Code to bring, insofar as may be practicable, the rates of wages paid within the Fertilizer Industry to such levels as are necessary for the creation and maintenance of the highest practicable standard of living; to restore the income of enterprises within the industry to levels which will make possible the payment of such wages and avoid the further depletion and destruction of capital assets; and from time to time to revise the rates of wages in such manner as will currently reflect the equitable adjustment to variations in the cost of living.

ARTICLE II. PARTICIPATION

Participation in this Code, and any subsequent revision of or addition to the Code, shall be extended to any person, partnership or corporation in the Fertilizer Industry who accepts his share of the cost and responsibility, as well as the benefit, of such participation by becoming a member of The National Fertilizer Association.

ARTICLE III. DIVISION OF THE INDUSTRY

A. Powers

For the purpose of the administration of this code the Fertilizer Industry shall be divided into divisions as set forth below. Each division shall designate or establish its own administrative agency or agencies. Each such division shall be independent and self-governing in respect of all conditions and problems relating exclusively to the said division, subject however to the general supervisory powers of the Fertilizer Recovery Committee as hereinafter set forth. Proposals in respect of matters affecting more than one division may be initiated by any division, and shall be submitted for consideration

to the Fertilizer Recovery Committee of The National Fertilizer Association, hereinafter described, and its determination shall be binding upon said division and all other divisions affected thereby.

B. Names of Divisions

Divisions are hereby established as follows:

Mixed and Bagged Goods,
Sulphuric Acid,
Phosphate Rock
Nitrogen,
Superphosphate,
Potash,
Sulphur,
Miscellaneous Plant Food Division (covering all other materials used as plant food);

provided that if the manufacturers of Sulphuric Acid, Phosphate Rock, Nitrogen, Potash or Sulphur determine to organize either themselves or with others in forming codes of fair competition, then such divisions shall be excluded from the operation of this Code.

C. Administrative Committee

Each of the above divisions, and any others which may subsequently be formed within the Fertilizer Industry, shall set up an Administrative Committee for the purpose of administering the provisions of the Code, to secure adherence thereto, to hear and adjust complaints, to consider proposals for amendments thereof and exceptions thereto, (and such other provisions as you may wish to include), and otherwise to carry out within the division the purposes of the National Industrial Recovery Act as set forth in this Code.

If a division, as named above, does not concur in the submittal of this Code; or if, at any time thereafter, a division fails to perform its obligations as provided here under, the Fertilizer Recovery Committee of The National Fertilizer Association, hereinafter described, is hereby empowered to adopt a Code for the division and may provide for the administration of that Code as if said Fertilizer Recovery Committee were the Executive of the division concerned.

ARTICLE IV. DIVISION REGULATIONS

A. Labor Code

Each of the above divisions, and any other which may subsequently be formed, shall promptly undertake the formulation of a labor code, which shall be submitted through the Fertilizer Recovery Committee, after approval by it, to the President of the United States for his approval.

The labor code established by the said division shall, upon approval of the Fertilizer Recovery Committee, be binding upon all producers of products in such division. The labor code of each division

shall contain the following provisions:

(a) Employees in the Fertilizer Industry shall have the right to organize and bargain collectively through representatives of their own choosing, and shall be free from the interference, restraint, or coercion of employers of labor, or their agents in the designation of such representatives or in self-organizations or in other concerted activities for the purpose of collective bargaining or other mutual aid or protection.

(b) No employee in the Fertilizer Industry, and no one seeking employment therein, shall be required as a condition of employment to join any company union or to refrain from joining a labor organization of his own choosing.

(c) Employers of labor in the Fertilizer Industry agree to comply with the maximum hours of labor, minimum rates of pay, and other working conditions approved or prescribed by the President.

And, in addition,

(d) A classification of kinds of labor in the Fertilizer Industry.

(e) Maximum hours of each class of labor, and exceptions.

(f) Minimum wages for each class of labor, and exceptions, which shall take into consideration geographical location of plants and varying skill of employees.

(g) Such other provisions as may be found necessary in regard to working conditions.

B. Production Code

A production code will be worked out later in cooperation with the industry in each of the territories. There has not been time to prepare one for submittal now.

C. Price Code

Each of the above divisions, and any others which may subsequently be formed, shall proceed at once to provide for standard methods of costing which shall be used by all manufacturers within that division for the purposes of this section of the Code.

Each division, with the approval of the Fertilizer Recovery Committee, shall divide the United States into zones suitable for the enforcement of the code of fair competition and shall determine for each such zone minimum prices for the different grades of fertilizer and/or fertilizer materials sold therein, which prices shall be fair both to the producer and to the consumer and enable the industry to pay rates of wages necessary to maintain the highest practicable

standard of living for labor. Schedules of such prices shall be submitted by the Fertilizer Recovery Committee to the President of the United States for approval under the National Industrial Recovery Act. The sale or offer for sale of any fertilizer or fertilizer material at a price below the minimum price so established therefor, shall be deemed to be an unfair method of competition in violation of this code.

ARTICLE V. FERTILIZER RECOVERY COMMITTEE

A. Representation

There shall be a Fertilizer Recovery Committee of The National Fertilizer Association appointed by the President of The National Fertilizer Association with the approval of the Board of Directors.

This Fertilizer Recovery Committee shall be the general planning and coordinating agency for the industry in respect to all matters under the Industrial Recovery Act. Its members selected by established divisions shall be empowered by the said divisions to act for them conclusively in respect to all matters before the committee for consideration and within its jurisdiction. The committee shall have powers and duties as provided herein, and in addition thereto it shall

(a) From time to time require such reports as in its judgment may be necessary to advise it adequately of the administration and enforcement of the provisions of this Code;

(b) Upon complaint of interested parties, or upon its own initiative, make such inquiry and investigation into the operation of the Code as may be necessary; and

(c) Make rules and regulations necessary for the administration and enforcement of this Code. The Committee may delegate any of its authority to sub-committees of its own members and may designate such agents as it shall determine.

ARTICLE VI. INDUSTRY REGULATIONS

A. Marketing Code

The fertilizer Recovery Committee may establish a marketing code with provisions with respect to:

(a) Classification of outlets or purchases and recognition of standard and economically justifiable price differentials among them;

(b) In order to eliminate waste, reduce the cost of manufacture, bearing in mind the economic interests of the farmer, the Fertilizer Recovery Committee may establish a list of grades of mixed fertilizer for each state. The sale or offer for sale within any State of mixed fertilizer not conforming to one of the grades so established, shall be a violation of this Code, provided that the

Fertilizer Recovery Committee may provide such exceptions from this rule as it deems necessary;

(c) Cooperative advertising for the industry;

(d) Collection and interchange of credit information;

(e) Cooperative administration of insolvent debtors;

(f) Establishment of minimum consumer prices to simplify observance of the code;

(g) Limitation of salesmen by tonnage and/or territories with a view to reducing cost of distribution.

(h) And/or other aspects of marketing.

B. Trade Practice Rules

The following shall be deemed to be unfair competition within the meaning of the Industrial Recovery Act:

(a) The defamation of competitors by falsely imputing to them dishonorable conduct, inability to perform contracts, questionable credit standing, or by other false representations, or the false disparagement of the grade or quality of their goods, with the tendency and capacity to mislead or deceive purchasers or prospective purchasers, is an unfair trade practice.

(b) The payment or allowance, except as required by law or rebates, revisions, commissions, or unearned discounts, whether in the form of money or otherwise, or extending to certain purchasers, special services or privileges not extended to all purchasers under like terms and conditions.

(c) Withholding from or inserting in the invoices statements which make the invoice false regarding the whole or any part of the transaction represented on the face thereof.

(d) Providing truck service without adequate charge for it, or reimbusing the dealer, purchaser, consignee or agent for the cost of trucking if reimbursement is not provided for in the manufacturers' price list.

(e) Selling or consigning chemicals and materials with special concessions or at reduced prices, given to induce the buyer or consignee to purchase mixed fertilizer and/or other fertilizer materials.

(f) Failure to enforce in good faith the terms of contracts previously made for the sale of fertilizer, for example:

(1) Selling on terms that require the payment of sight draft on presentation of bill of lading (S.D.B.L.) and then waiving the obligation to pay

cash before documents or goods are delivered thus deferring the payment of the cash to some future date.

(2) Selling and delivering goods on time, consignment or open bill of lading terms on S.D.B.L. price or waiving earned interest.

(g) Furnishing special containers, preparing special formulas for individual buyers or consignees or using special ingredients in standard formulas, without adequate charge for the cost of such containers, formulas, or special ingredients, as an inducement to the making of a contract and/or sale.

(h) Making special allowances to buyers or consignees under the guise of advertising expense, or giving any other form of gratuity.

(i) Adopting selling methods that promote secret rebates and concessions, such as:

(1) Employing a buyer or consignee or his agent or any one employed by or connected with a buyer or consignee with the purpose, design and effect of influencing the business of such customer.

(2) Carrying on books by seller or consignee as delinquent, balances due by solvent customer with no intention of requiring ultimate payment.

(j) Enabling the purchaser or consignee to obtain fertilizer apparently on cash terms but in fact on credit extended to him by or through the manufacturer, as, for example: A transaction covered by a sight draft and bill of lading under which the purchaser or consignee is made to appear as honoring documents upon presentation by payment with his own funds, when in fact the cash involved was obtained in whole or in part upon a negotiable instrument (usually discounted at a bank) bearing the endorsement of the manufacturer; or a transaction by which the manufacturer, although he does not actually endorse the obligation, renders himself legally or morally responsible for its payment if the purchaser or consignee should fail to meet his obligation to the bank at maturity.

(k) Refunding to the buyer or consignee, either directly or indirectly, any part of the purchase price on account of goods accepted and/or settled for by the buyer or consignee under the terms of the contract. This practice is commonly referred to as "retroactive settlement."

ARTICLE VII. STATISTICS

In order to provide data necessary for the administration of the National Industrial Recovery Act the members of the Fertilizer Industry shall furnish, and the Fertilizer Recovery Committee shall gather, statistical information from all the members of the Industry.

ARTICLE VIII GENERAL

(a) No provision in this Code shall be interpreted or applied in such a manner as to:

1. Promote monopolistic practices,

2. Permit or encourage unfair competition,

3. Eliminate or oppress small enterprise, or

4. Discriminate against small enterprise.

(b) This Code or any of its provisions may be cancelled or modified and any approved rule issued thereunder shall be ineffective to the extent necessary to conform to any action by the President under Section 10 (b) of the National Industrial Recovery Act.

(c) The Fertilizer Recovery Committee of the Fertilizer Industry shall from time to time make to each Division established or to be established under the provision of this Code, such recommendations, including amendments of the Code, as in their judgment will aid the effective administration of this Code or may be necessary to effectuate within the Fertilizer Industry or within any Division thereof the purpose of the National Industrial Recovery Act as administered.

(d) Amendment to this Code may be proposed by any established division to the Fertilizer Recovery Committee or may be initiated by it, and when submitted to and approved by the Fertilizer Recovery Committee and by the President of the United States or his nominee shall be effective.

(e) Violation by any producer of fertilizer or fertilizer material of any provision of this Code, or of any approved rule issued thereunder, is an unfair method of competition.

(f) This Code shall be in effect beginning ten days after its approval by the President of the United States.

APPENDIX II

EXHIBIT 12

FERTILIZER RECOVERY COMMITTEE
(as constituted June 21, 1933)

Ex Officio

John J. Watson, President, The National Fertilizer Association
Charles J. Brand, Executive Secretary and Treasurer,
The National Fertilizer Association

District No. 1

E. H. Jones, Apothecaries Hall Company, Waterbury, Connecticut

District No. 2

Horace Bowker, The American Agricultural Chemical Company,
New York City
T. E. Milliman, Cooperative G. L. F. Mills, Buffalo, New York.

District No. 3

B. H. Brewster, Jr., The Baugh & Sons Co., Baltimore, Maryland
C. F. Hockley, The Davison Chemical Co., Baltimore, Maryland
W. W. Price, Smyrna, Delaware
W. E. Valliant, Valliant Fertilizer Co., Baltimore, Maryland

District No. 4

C. F. Burroughs, F. S. Royster Guano Co., Norfolk, Virginia
George A. Holderness, Virginia-Carolina Chemical Corp.,
Richmond, Virginia.
Oscar F. Smith, Smith-Douglass Co., Norfolk, Virginia
Thomas H. Wright, Acme Manufacturing Co., Wilmington, North Carolina.

District No. 5

J. Ross Hanahan, Planters Fertilizer & Phosphate Co., Charleston,
South Carolina
A. F. Pringle, Merchants Fertilizer Co., Charleston, South Carolina.
J. D. Prothro, Aiken Fertilizer Co., Aiken, South Carolina.

District No. 6

H. B. Baylor, International Agricultural Corp., Atlanta, Georgia.
J. E. Sanford, Armour Fertilizer Works, Atlanta, Georgia.
A. D. Strobhar, Southern Fertilizer & Chemical Co., Savannah, Georgia.

District No. 7

E. A. Brandis, Standard Chemical Co., Troy, Alabama
J. W. Dean, Knoxville Fertilizer Co., Knoxville, Tennessee.

District No. 8

C. D. Jordan, Southern Cotton Oil Co., New Orleans, La.
P. H. Manire, Marshall Cotton Oil Co., Marshall, Texas.
C. D. Shallenberger, Shreveport Fertilizer Works, Shreveport, Louisiana.

District No. 9

R. P. Benedict, Darling & Co., Chicago, Illinois.
L. W. Rowell, Swift & Co., Chicago, Illinois.

District No. 10

Weller Noble, The Pacific Guano & Fertilizer Co., Berkeley, California.

District No. 11

C. T. Melvin, The Gulf Fertilizer Co., Tampa, Florida.
R. B. Trueman, Trueman Fertilizer Co., Jacksonville, Florida.

Nitrogen

A. P. Axtell, Anglo-Chilean Sales Corp., New York City.
W. N. McIlravy, The Barrett Company, New York City.

Potash

A. A. Holmes, United States Potash Co., New York City.
Frederic Vieweg, American Potash & Chemical Corp., New York City.

Sulphur

H. R. Wemple, Texas Gulf Sulphur Co., New York City.

Sulphuric Acid

E. H. Westlake, Tennessee Corporation, New York City.

Exhibit 13

FOR RELEASE ON RECEIPT

DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON

SULPHURIC ACID

(Data reported by Fertilizer Manufacturers only)

December, 1935

Compared with preceding months

Statistics on production, purchases, stocks, etc., of sulphuric acid, based on data reported by 69 fertilizer manufacturers for 1935 and 71 for 1934 and 1933, were released today by Director W. L. Austin, Bureau of the Census, Department of Commerce, and are presented in the following tables. Two manufacturers, reporting prior to 1935, have gone out of business.

Table 1.---PRODUCTION AND PURCHASES

(Quantities expressed in short tons; Northern District, States north of Virginia-North Carolina line; Southern District, States south of Virginia-North Carolina line)

Year and Month	PRODUCED BY REPORTING MANUFACTURERS			PURCHASED FROM FERTILIZER MANUFACTURERS			PURCHASED FROM NON-FERTILIZER MANUFACTURERS		
	Total	Northern District	Southern District	Total	Northern District	Southern District	Total	Northern District	Southern District
1935									
January	169,301	98,802	70,499	34,545	13,705	20,840	27,824	18,035	9,789
February	154,359	86,546	67,813	26,269	12,165	14,104	21,647	8,772	12,875
March	141,352	90,944	50,408	18,769	10,646	8,123	18,636	10,929	7,707
April	139,333	95,748	43,585	11,760	7,508	4,252	13,397	7,874	5,523
May	111,102	79,632	31,470	11,610	6,809	4,801	13,186	7,108	6,078
June	99,176	73,343	25,833	16,830	12,852	3,978	20,862	14,378	6,484
July	110,249	77,441	32,808	27,714	14,305	13,409	23,334	17,246	6,088
August	123,209	77,710	45,499	35,573	10,768	24,805	10,632	7,960	2,672
September	130,260	82,306	47,952	35,742	7,669	28,073	12,111	4,522	7,589
October	149,729	87,491	62,238	33,396	10,093	23,303	17,540	9,344	8,196
November	153,792	92,171	61,621	35,134	16,249	18,885	*18,946	12,958	*5,988
December	172,823	110,445	62,378	30,185	14,630	15,555	22,402	14,061	8,341
Total (Year)	1,654,685	1,052,581	602,104	317,527	137,399	180,128	220,517	133,187	87,330
1934									
January	143,811	82,200	61,611	32,312	13,697	18,615	29,470	16,738	12,732
February	139,615	79,334	60,281	20,151	3,833	16,318	27,300	12,332	14,968
March	132,549	83,046	49,503	16,945	4,763	12,182	27,766	14,269	13,497
April	119,619	81,149	38,470	12,158	8,024	4,134	22,721	9,973	12,748
May	107,563	80,068	27,500	5,735	4,367	1,368	18,793	15,002	3,791
June	92,894	72,119	20,775	3,441	2,252	1,189	26,577	22,395	4,182
July	88,049	65,887	22,162	7,411	3,712	3,699	25,951	21,239	4,712
August	97,478	65,589	31,889	13,048	4,983	8,065	17,060	13,817	3,243
September	116,120	74,960	41,160	21,136	8,475	12,661	12,560	7,113	5,447
October	149,968	89,969	59,999	38,164	10,851	27,313	27,249	18,492	8,757
November	159,781	91,339	68,442	39,330	12,727	26,603	22,796	16,146	6,650
December	172,052	99,399	72,653	36,734	12,330	24,404	28,813	19,083	9,730
Total (Year)	1,519,504	965,059	554,445	246,565	90,014	156,551	287,056	186,599	100,457
1933									
January	114,618	69,174	45,444	13,794	7,548	6,246	16,193	12,054	4,139
February	99,825	57,870	41,955	10,625	3,821	6,804	10,384	8,378	2,006
March	79,388	47,978	31,350	10,309	5,765	4,544	8,544	4,933	3,611
April	73,900	51,007	22,893	12,122	3,623	8,499	14,487	7,119	7,368
May	90,605	68,777	21,828	7,311	4,531	2,780	8,247	4,831	3,416
June	76,530	66,318	10,212	10,323	6,173	4,150	13,320	9,850	3,470
July	98,587	79,919	18,668	23,829	12,407	11,422	16,147	8,159	7,988
August	131,016	82,472	48,544	29,102	11,165	17,937	21,804	9,606	12,198
September	133,056	81,323	51,733	17,765	4,038	13,727	23,604	8,493	15,111
October	168,406	96,917	61,489	27,128	7,304	19,822	31,693	17,797	13,896
November	150,407	91,478	63,929	34,589	11,079	23,510	33,680	22,139	11,541
December	155,695	93,059	62,636	36,181	11,706	24,475	33,763	13,421	10,342
Total (Year)	1,368,973	886,288	480,687	233,076	89,160	143,916	231,866	126,780	95,086

DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON

SULPHURIC ACID

Table 2. - CONSUMPTION IN FERTILIZER MANUFACTURE AND SHIPMENTS

(Quantities expressed in short tons)

Year and Month	CONSUMED BY REPORTING MANUFACTURERS IN PRODUCTION OF FERTILIZER			SHIPPED TO OTHER THAN FERTILIZER MANUFACTURERS			SHIPPED TO FERTILIZER MANUFACTURERS		
	Total	Northern District	Southern District	Total	Northern District	Southern District	Total	Northern District	Southern District
1935									
January	162,658	81,540	81,118	35,186	27,331	7,856	39,693	24,304	15,389
February	133,319	62,568	70,751	38,716	29,494	9,222	30,615	17,470	13,146
March	104,041	50,806	53,235	48,319	35,256	7,063	41,990	36,505	5,485
April	93,873	49,060	44,813	40,293	33,218	7,075	33,855	29,523	4,332
May	87,944	54,454	33,490	29,714	23,014	6,700	18,473	14,681	3,792
June	75,590	48,356	27,334	34,388	29,756	4,626	25,351	22,308	3,043
July	94,980	55,216	39,764	40,739	34,601	6,138	24,684	19,485	5,199
August	99,573	43,778	55,795	48,404	39,412	8,992	28,516	19,647	8,869
September	101,708	41,204	60,504	44,717	36,313	7,404	30,888	17,395	13,493
October	131,441	56,652	74,789	50,802	41,151	9,651	28,031	20,128	7,903
November	*128,496	58,815	*67,681	45,478	37,472	8,006	29,525	21,735	7,790
December	132,508	61,892	70,616	51,116	42,043	9,073	38,363	30,458	7,905
Total (Year)	1,343,331	663,741	679,590	503,866	412,061	91,805	370,014	273,739	96,275
1934									
January	161,500	77,152	84,348	27,163	25,793	1,370	26,664	17,738	8,926
February	149,236	61,191	88,045	22,793	21,293	1,500	21,242	15,452	5,790
March	133,983	62,676	71,307	34,167	31,133	3,034	23,733	19,247	4,486
April	107,842	59,009	48,833	30,240	28,168	2,072	21,926	19,095	2,831
May	83,969	55,398	28,571	25,894	24,143	1,751	14,312	13,199	1,113
June	80,214	55,613	24,601	25,783	24,400	1,383	10,842	9,263	979
July	83,079	57,172	25,907	21,991	20,205	1,786	14,596	11,936	2,660
August	77,404	42,052	35,352	29,587	25,544	4,043	29,111	22,315	6,796
September	85,915	40,139	45,776	23,594	20,545	3,049	31,055	22,943	8,113
October	137,357	66,765	70,592	34,938	27,999	6,939	39,797	23,140	16,657
November	143,282	62,931	80,351	28,616	21,260	7,356	41,520	30,358	11,162
December	152,286	67,395	84,873	28,537	21,564	6,973	47,367	35,581	11,786
Total (Year)	1,396,049	707,493	688,556	333,303	292,047	41,255	320,566	240,265	80,301
1933									
January	101,336	53,597	47,739	26,538	24,060	2,478	14,641	9,424	5,217
February	88,160	41,337	46,843	21,675	19,074	2,601	14,063	9,604	4,459
March	76,573	38,060	38,513	19,751	17,420	2,331	14,439	11,764	2,675
April	71,649	36,534	35,115	23,618	22,362	1,256	14,066	9,746	4,319
May	67,162	39,391	27,771	37,273	35,091	2,182	13,194	11,568	1,626
June	53,586	40,650	12,936	30,819	28,662	2,157	14,236	13,829	407
July	71,951	45,001	26,950	36,885	37,374	1,511	13,251	10,082	3,169
August	117,728	81,698	36,030	41,970	37,377	4,593	16,511	11,775	4,736
September	92,962	37,047	55,915	36,387	34,384	4,003	31,215	14,908	16,307
October	160,698	73,848	86,840	36,270	32,583	3,687	23,276	16,959	6,317
November	154,206	66,940	87,266	33,728	31,948	1,780	23,994	15,640	8,354
December	150,097	66,416	83,681	38,008	35,290	2,718	26,507	17,445	9,062
Total (Year)	1,206,117	590,499	615,618	386,861	355,525	31,296	219,392	152,744	66,648

* Revised.

DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON

SULPHURIC ACID

Table 3. - STOCKS ON HAND, END OF MONTH

(Quantities expressed in short tons)

Year and Month	Total	Northern District	Southern District
1935			
January	111,397	82,044	29,353
February	111,022	79,995	31,027
March	101,429	69,947	31,482
April	97,898	69,176	28,722
May	97,665	70,576	27,089
June	97,901	70,729	27,172
July	99,174	70,419	28,755
August	91,995	64,020	27,975
September	91,066	60,607	30,459
October	81,457	49,604	31,853
November	*88,850	53,560	*35,270
December	92,253	58,303	33,950
1934			
January	104,465	74,534	29,931
February	98,260	72,097	26,163
March	83,637	61,119	22,518
April	78,127	53,993	24,134
May	86,048	60,690	25,358
June	92,781	68,180	24,541
July	94,466	69,705	24,761
August	86,672	64,155	22,487
September	95,923	71,106	24,817
October	99,119	72,514	26,605
November	107,609	78,177	29,432
December	117,036	84,449	32,587
1933			
January	106,367	80,815	25,552
February	103,283	80,869	22,414
March	90,701	72,301	18,400
April	81,884	65,408	16,476
May	70,413	57,497	12,916
June	71,945	56,711	15,234
July	86,403	64,721	21,682
August	92,116	67,114	25,002
September	104,037	74,689	29,348
October	101,028	73,317	27,711
November	113,938	83,485	29,453
December	113,985	82,560	31,445

FOR RELEASE
ON RECEIPT

DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON

SUPERPHOSPHATES

December, 1936

Compared with preceding months

Monthly statistics relating to production, receipts, shipments, and stocks of superphosphates, based on data reported by 69 manufacturers, and released today by Director W. L. Austin, Bureau of the Census, Department of Commerce, are presented in the following tables. Two manufacturers, reporting prior to 1935, have gone out of business. The manufacturers, whose data are included in these statistics, produced more than 95 per cent of the total value of superphosphates reported at the Census of Manufactures for 1933.

Table A - PRODUCTION, RECEIPTS, AND STOCKS (Short Tons)

Year and Month	PRODUCED						RECEIVED FROM OTHER ACIDULATORS 1/ (Including inter-company transfers)			STOCKS					
	Bulk Superphosphates			Base and mixed goods						Bulk Superphosphates			Base and mixed goods		
	Total U. S.	Northern District	Southern District	Total U. S.	Northern District	Southern District	Total U. S.	Northern District	Southern District	Total U. S.	Northern District	Southern District	Total U. S.	Northern District	Southern District
1935															
January	348,210	175,208	167,002	12,895	4,189	8,706	43,145	24,945	18,200	1,189,505	477,205	692,300	738,351	294,494	443,857
February	282,810	136,829	145,981	9,385	4,772	4,613	30,097	20,853	9,244	1,160,817	502,292	658,525	823,646	345,482	478,164
March	246,286	142,945	103,341	9,200	4,933	4,267	32,439	14,245	18,194	964,940	419,958	494,982	623,122	311,166	311,956
April	203,152	120,571	82,581	7,414	6,037	1,377	40,268	27,817	12,451	814,804	392,284	422,520	354,842	190,026	164,816
May	168,364	101,111	67,273	7,570	5,791	1,779	44,723	30,835	13,888	621,536	393,051	438,485	297,321	106,953	130,368
June	167,095	124,100	42,995	8,441	6,172	2,269	18,963	14,273	4,690	570,835	415,569	455,266	267,111	134,924	132,187
July	205,105	131,499	73,606	6,734	6,329	405	22,357	20,563	1,794	914,169	420,491	493,678	366,162	217,572	148,590
August	221,772	111,223	110,549	6,865	4,427	2,438	41,173	17,913	23,260	979,038	402,051	576,987	442,315	275,857	166,458
September	226,317	101,629	124,688	8,484	5,026	3,458	35,037	27,138	7,899	1,013,399	365,170	648,229	352,774	174,949	177,825
October	281,892	130,178	151,714	10,204	7,460	2,744	37,952	28,010	15,892	1,108,407	388,253	714,154	319,011	115,984	203,027
November	288,307	144,284	143,783	10,653	4,480	6,173	52,416	34,128	18,288	1,199,542	446,855	752,687	433,418	172,970	260,448
December	320,800	167,853	152,947	11,784	7,540	4,224	48,119	23,956	24,164	1,217,767	485,572	732,195	619,909	250,793	369,116
Total (year)	2,954,130	1,587,670	1,366,460	109,609	67,156	42,453	446,599	284,675	161,924	---	---	---	---	---	---
1934															
January	328,345	158,784	169,561	14,223	4,040	10,183	37,098	14,019	23,079	1,130,174	486,674	643,500	671,698	281,786	389,906
February	295,334	122,590	172,744	15,424	5,755	9,669	31,069	10,820	20,249	1,124,243	486,646	637,597	766,753	326,813	441,940
March	285,762	133,290	152,472	10,398	3,203	7,195	41,172	22,144	19,028	976,775	468,860	507,915	664,731	318,043	346,688
April	238,936	138,907	94,029	4,884	2,825	2,059	30,650	20,060	10,590	806,914	376,469	430,445	369,970	181,725	188,245
May	168,509	112,908	55,601	3,669	3,588	81	23,940	18,838	5,702	820,096	358,628	461,468	249,021	101,943	147,078
June	153,236	113,047	40,189	3,789	3,727	62	12,176	7,483	4,693	839,680	375,034	464,646	268,327	117,707	150,620
July	147,084	102,519	44,565	5,488	4,752	736	15,709	12,041	3,668	871,093	391,120	479,973	328,668	167,476	161,192
August	173,566	87,841	64,725	9,860	7,810	2,050	24,880	17,493	7,387	875,329	365,111	510,209	392,723	216,670	176,053
September	168,007	93,429	94,578	9,406	6,565	2,841	24,687	14,036	10,651	880,236	318,102	562,136	301,065	108,244	192,821
October	276,444	139,531	136,913	13,521	10,988	2,533	25,469	10,612	14,857	957,279	339,643	617,636	321,241	99,059	222,182
November	307,653	154,366	153,287	15,959	5,920	10,039	43,482	30,608	12,880	1,078,044	412,893	665,151	425,496	142,436	283,060
December	332,140	160,935	171,205	9,912	3,743	6,169	36,318	24,998	11,320	1,159,392	456,542	702,850	567,974	213,291	354,683
Total (year)	2,868,016	1,518,147	1,349,869	116,533	62,856	53,677	348,629	202,546	145,083	---	---	---	---	---	---
1933															
January	227,154	129,262	97,892	8,507	2,967	5,540	24,719	14,652	10,067	1,089,671	432,209	657,462	459,466	243,386	216,080
February	188,531	92,426	96,105	7,954	4,062	3,892	17,284	10,851	6,433	1,065,273	432,215	633,058	541,503	282,709	258,794
March	167,114	88,117	78,997	12,830	4,364	8,466	19,115	12,036	7,079	1,008,898	401,660	607,238	451,697	260,849	190,848
April	158,890	89,157	69,753	8,983	3,004	5,979	33,029	16,790	16,239	941,297	388,857	552,440	333,869	164,708	69,161
May	177,849	108,734	69,115	5,585	4,291	1,294	18,407	11,324	7,383	877,497	380,120	497,377	133,273	86,874	46,399
June	130,271	103,496	26,775	4,325	3,987	338	24,192	14,416	9 776	514,853	300,159	214,694	141,127	93,081	48,046
July	164,566	108,991	55,675	9,481	8,443	1,038	14,127	12,303	1 824	565,370	317,305	248,065	198,131	142,888	55,243
August	262,705	131,483	131,222	7,249	4,505	2,744	20,461	13,829	6,632	691,913	352,866	339,047	284,165	186,516	97,649
September	240,843	103,836	136,407	7,191	4,797	2,394	22,846	9,971	12,873	738,567	303,838	431,729	208,232	114,079	94,153
October	320,307	149,456	170,851	10,426	6,433	3,993	27,576	15,395	12,181	861,546	344,637	516,909	221,927	107,686	114,241
November	334,457	152,094	182,363	14,178	5,327	8,851	29,243	19,828	9,415	1,011,529	412,484	599,045	335,336	163,068	172,268
December	322,783	156,814	165,969	22,337	5,807	16,530	27,599	6,679	20,920	1,089,179	446,975	642,204	497,589	221,195	276,394
Total (year)	2,694,870	1,413,846	1,281,024	117,046	57,987	59,059	278,596	158,015	120,581	---	---	---	---	---	---

1/ Includes both bulk superphosphates and base and mixed goods.

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Exhibit 15

DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON

SUPERPHOSPHATES

Table B - SHIPMENTS (Short Tons)

Year and Month	BULK SUPERPHOSPHATES												BASE AND MIXED GOODS		
	Total			To Mixers			To Other Acidulators (Including inter-company transfers)			To Consumers					
	Total U. S.	Northern District	Southern District	Total U. S.	Northern District	Southern District	Total U. S.	Northern District	Southern District	Total U. S.	Northern District	Southern District	Total U. S.	Northern District	Southern District
1935															
January	145,702	72,957	72,745	81,183	44,545	36,638	29,986	18,525	11,461	34,553	9,887	24,666	47,065	9,451	37,632
February	177,524	78,130	99,394	93,576	47,458	46,118	20,092	10,073	10,019	63,856	20,599	43,257	88,331	28,449	59,882
March	367,045	137,232	229,813	145,357	74,285	71,072	32,555	13,544	19,011	189,133	49,403	139,730	316,806	91,510	225,296
April	320,959	168,734	152,225	108,402	58,266	40,136	43,405	24,916	18,489	169,152	75,552	93,600	347,718	184,252	163,466
May	163,303	109,531	53,772	60,466	41,060	19,406	23,033	14,567	8,466	79,704	53,904	25,800	160,096	116,439	43,657
June	87,018	65,781	21,237	44,587	32,549	12,038	17,488	12,891	4,597	24,973	20,341	4,632	40,048	27,264	12,784
July	75,392	62,914	12,478	29,898	27,572	2,326	26,098	18,371	7,727	19,396	16,971	2,425	14,469	8,110	6,359
August	93,514	65,675	26,839	53,267	43,042	10,225	23,825	12,236	11,589	16,422	11,397	5,025	36,895	27,334	9,561
September	191,277	159,427	31,850	51,289	46,279	5,010	57,929	42,676	15,251	82,059	70,470	11,589	133,990	112,110	21,880
October	171,809	126,050	45,759	62,548	53,798	8,744	21,954	9,361	12,573	87,313	62,871	24,442	105,113	69,526	33,587
November	108,372	62,435	45,937	51,113	34,522	16,791	28,081	18,778	9,303	29,178	9,335	19,843	32,680	6,251	26,429
December	145,494	69,989	75,505	75,305	48,047	27,258	41,751	14,801	26,950	28,438	7,141	21,297	33,519	13,122	20,397
Total (Year).	2,047,309	1,179,855	867,454	856,955	561,823	295,732	366,177	210,761	155,416	824,177	407,871	416,306	1,354,728	693,798	660,930
1934															
January	137,192	68,338	68,854	63,681	43,065	25,596	27,959	17,841	10,118	40,552	7,412	33,140	44,988	11,613	33,375
February	165,102	77,428	87,674	85,047	46,541	38,506	20,889	12,623	7,966	59,166	18,264	41,902	85,321	16,500	68,821
March	327,846	138,137	189,709	134,666	75,046	59,620	31,808	16,541	15,267	161,372	46,550	114,822	258,746	62,941	195,805
April	374,012	215,825	158,186	131,770	94,516	37,254	33,216	15,225	17,991	209,026	106,085	102,941	358,855	174,803	184,052
May	159,291	119,189	40,102	61,935	52,171	9,764	11,848	4,834	7,014	85,508	62,184	23,324	146,100	104,129	41,971
June	99,827	72,753	27,074	52,824	47,715	14,909	15,740	7,842	7,898	21,463	17,196	4,267	32,382	21,987	10,396
July	61,939	45,211	16,728	38,257	28,641	9,616	13,971	8,036	5,935	9,711	8,534	1,177	15,072	8,044	7,028
August	75,250	62,220	13,030	39,052	33,629	5,423	14,367	10,719	3,648	21,831	17,872	3,959	40,073	28,358	11,715
September	180,990	148,336	32,652	49,840	37,119	12,721	22,398	13,020	9,378	108,752	98,199	10,553	134,022	120,793	13,229
October	141,875	100,724	41,151	53,212	42,691	10,521	25,177	19,374	5,803	63,486	38,459	25,027	78,444	48,096	30,348
November	105,206	63,270	42,936	52,193	40,331	11,862	18,948	11,826	7,122	34,065	11,737	13,328	55,903	19,883	36,020
December	121,027	67,478	53,549	70,930	46,025	24,905	28,739	14,392	12,347	23,358	7,061	16,297	38,310	10,068	28,242
Total (Year).	1,949,857	1,178,912	770,945	858,207	587,510	270,697	262,160	151,849	110,311	829,490	439,553	389,937	1,284,216	613,215	651,001
1933															
January	89,741	62,872	26,869	55,737	41,238	14,499	17,824	14,581	3,243	16,180	7,053	9,127	35,077	10,655	24,422
February	102,014	50,882	51,132	59,445	37,891	21,554	10,376	4,976	5,399	31,694	8,015	23,679	54,249	17,350	36,899
March	259,824	100,183	159,641	88,335	44,041	44,294	16,087	8,600	7,487	155,402	47,542	107,860	156,868	56,338	139,530
April	421,979	186,623	234,956	104,737	79,288	25,509	21,331	22,554	8,777	265,511	84,841	180,670	372,506	131,277	241,229
May	188,945	129,016	59,929	78,539	61,410	17,129	16,340	10,908	5,432	94,066	56,698	37,368	157,375	102,030	55,345
June	77,225	52,146	25,079	47,921	31,776	16,145	7,796	4,114	3,682	21,508	16,256	5,252	41,044	22,754	18,290
July	65,358	53,528	11,730	35,498	29,571	5,927	12,345	9,073	3,272	17,515	14,984	2,531	15,714	9,908	5,806
August	72,436	56,033	16,402	43,854	36,992	6,862	13,198	7,649	5,549	15,403	11,392	4,011	33,308	11,976	11,326
September	174,291	144,169	30,122	66,575	61,332	5,243	13,280	4,533	8,747	94,436	78,304	16,132	110,447	95,831	14,616
October	141,851	94,184	47,667	52,746	40,615	12,131	15,015	7,035	7,980	74,090	46,534	27,556	70,134	35,997	34,137
November	82,112	50,576	31,536	51,114	35,705	15,409	10,956	5,376	5,580	20,042	9,495	10,547	25,587	3,641	21,946
December	102,561	68,301	34,260	61,692	46,262	15,430	22,640	14,710	7,930	18,229	7,529	10,700	30,664	7,409	23,255
Total (Year).	1,778,056	1,048,813	729,243	766,193	546,061	220,132	187,687	114,109	73,578	824,176	388,643	435,533	1,131,707	505,066	626,641

Phosphates, crude: Marketed production in the United States by principal producing areas (*)

(in thousands)

Year	United States, total		Florida		Tennessee		Western States (Idaho, Montana, Wyoming)		All other	
	Long tons	Value	Long tons	Value	Long tons	Value	Long tons	Value	Long tons	Value
1900	1,491	$5,359	706	$2,983	454	$1,329	---	---	330	$1,047
1910	2,655	10,917	2,068	8,648	393	1,481	10	$33	185	755
1920	4,104	25,080	3,369	19,464	621	4,857	56	304	58	454
1921	2,064	12,270	1,780	10,432	264	1,721	6	26	14	92
1922	2,418	10,483	2,059	8,348	339	2,003	4	20	16	112
1923	3,007	11,576	2,548	9,060	416	2,255	30	176	13	86
1924	2,868	10,252	2,433	8,017	389	1,976	39	195	8	64
1925	3,482	11,546	2,930	8,789	464	2,335	73	319	15	102
1926	3,210	10,894	2,708	8,684	455	1,981	38	162	9	68
1927	3,171	11,253	2,637	8,646	482	2,319	52	288	---	---
1928	3,501	12,443	2,883	9,424	577	2,857	41	162	---	---
1929	3,761	13,153	3,088	9,901	634	3,097	39	155	---	---
1930	3,926	13,997	3,248	10,790	611	2,939	67	268	---	---
1931	2,535	9,288	2,061	7,202	344	1,546	130	541	---	---
1932	1,707	5,738	1,470	4,780	194	776	43	183	---	---
1933	2,490	7,872	2,136	6,417	334	1,373	20	82	---	---
1934	2,876	10,039	2,411	8,048	428	1,839	36	152	---	---

(*) United States Bureau of Mines publications.

APPENDIX II

EXHIBIT 17

RATIO OF WAGES TO COST OF MATERIALS & COMPARISON WITH ALL MANUFACTURING INDUSTRIES (*)

Year	Wages (Millions of Dollars)	Cost of Materials, Containers, Fuel, and Purchased Electrical Energy (Millions of Dollars)	Ratio of Wages to Cost of Materials, etc.	Ratio of Wages to Cost of Materials in the Fertilizer Industry to that in All Manufacturing
Fertilizer Industry:				
1919	$25	$185	13.5	
1921	16	145	11.0	
1923	16	128	12.5	
1925	18	138	13.0	
1927	18	138	13.0	
1929	18	160	11.2	
1931	12	107	11.2	
1933	7	69	10.1	
All Manufacturing Industries:				
1919	10,462	37,233	28.1	48.0
1921	8,202	25,321	32.4	33.9
1923	11,009	34,706	31.7	39.4
1925	10,730	35,936	29.9	43.4
1927	10,849	35,133	30.9	42.0
1929	11,621	38,550	30.1	37.2
1931	7,173	21,680	33.7	33.2
1933	5,262	16,748	30.5	33.1

(*) 1919-1929 Census of Manufactures, 1930, Vol. II, All Manufacturing Industries, Table 1, p. 14, Fertilizer Industry, Table 1, p.686.

1931-1933 All Manufacturing Industries, Census of Manufactures, 1933, Summary by Industries, January 23, 1935, Table 1, p. 1, Fertilizer Industry, Census of Manufactures, 1933, report on Chemical Industries, Fertilizer Section, p. 17.

EXHIBIT 46

OCCUPATIONAL AND RACE CLASSIFICATION OF PERSONS 10 YEARS OLD AND OVER ENGAGED IN THE FERTILIZER INDUSTRY IN 1930 (*)

INDUSTRY AND OCCUPATION	Total	Male	Female	NATIVE WHITE		FOREIGN BORN WHITE		NEGRO		OTHER RACES	
				Male	Female	Male	Female	Male	Female	Male	Female
1. Fertilizer Factories	28,169	27,340	829	9,123	684	1,073	25	16,900	120	244	—
2. Owners, Operators and Proprietors	236	233	3	210	3	20	—	1	—	2	—
3. Managers and Officials	1,158	1,146	12	1,103	11	39	1	1	—	3	—
4. Foremen and Overseers	829	828	1	710	1	60	—	57	—	1	—
5. Chemical Engineers	14	14	—	12	—	2	—	—	—	—	—
6. Chemists	164	164	—	152	—	7	—	5	—	—	—
7. Other professional pursuits	31	30	1	25	1	4	—	1	—	—	—
8. Accountants and Auditors	124	123	1	116	1	7	—	—	—	—	—
9. Agents (Not elsewhere classified)	153	152	1	144	1	7	—	—	—	1	—
10. Bookkeepers and Cashiers	535	439	96	425	95	13	1	1	—	—	—
11. Clerks	639	519	120	478	116	27	3	13	1	1	—
12. Commercial Travelers	635	634	1	617	1	14	—	—	—	3	—
13. Credit Men	54	54	—	51	—	3	—	—	—	—	—
14. Messenger, Errand and Office Boys & Girls	37	37	—	27	—	—	—	10	—	—	—
15. Purchasing Agents	30	30	—	29	—	1	—	—	—	—	—
16. Salesmen and Saleswomen	657	657	—	625	—	21	—	3	—	8	—
17. Shipping Clerks	124	124	—	113	—	4	—	7	—	—	—
18. Stenographers and Typists	490	43	447	41	431	1	15	1	1	—	—
19. Weighers	127	127	—	93	—	6	—	28	—	—	—
20. Other clerical pursuits	35	30	5	28	5	2	—	—	—	—	—
21. Blacksmiths	35	35	—	24	—	3	—	8	—	—	—
22. Carpenters	119	119	—	97	—	9	—	13	—	—	—
23. Compositors, linotypers, and typesetters	43	42	1	23	1	2	—	17	—	—	—
24. Cranemen, Derrick Men, Hoist Men, etc.	76	76	—	70	3	—	—	5	—	—	—
25. Electricians	71	71	—	63	—	5	—	3	—	—	—
26. Engineers (Stationary)	134	134	—	104	—	16	—	14	—	—	—
27. Machinists	176	176	—	134	—	17	—	25	—	—	—
28. Mechanics (not otherwise specified)	133	133	—	101	—	7	—	25	—	—	—
29. Millwrights	88	88	—	71	—	8	—	9	—	—	—
30. Plumbers and Gas and Steam fitters	27	27	—	20	—	7	—	—	—	—	—
31. Other skilled trades	38	38	—	30	—	5	—	3	—	—	—
32. Chauffeurs and Truck and Tractor Drivers	782	782	—	459	—	50	—	191	—	82	—
33. Draymen and Teamsters	98	98	—	29	—	17	—	43	—	9	—
34. Firemen	137	137	—	38	—	21	—	75	—	3	—
35. Guards, Watchmen and Doorkeepers	233	233	—	190	—	16	—	27	—	—	—
36. Janitors	24	24	—	5	—	3	—	16	—	—	—
37. Laborers	18,243	16,157	86	2,220	7	550	—	15,268	79	119	—
38. Oilers of Machinery	48	48	—	28	—	9	—	11	—	—	—
39. Operatives	1,536	1,448	54	390	10	82	5	1,000	39	12	—
40. All other occupations	52	52	—	28	—	5	—	19	—	—	—

SOURCE:
(*) Fifteenth Census of the United States, 1930, Population, Volume V, General Report on Occupations, Table 2, Page 430.

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APPENDIX II - EXHIBIT 18

NOTE: Manufacturers with sulphuric acid, superphosphate, and dry mixing plants will fill in entire form. Dry Mixing plants will fill in only Sections C & D

CODE NO. _____

PAY ROLL ANALYSIS

Part 1

Location of Plant _____

Classifications	For the period from July 1, thru Dec. 31, 1928				For the period from Jan. 1, thru June 30, 1929			
	Total Number of Man Hours Worked*	Hourly Wage Rate	Hours Per Week Full-Time-Men	Hours Per Shift	Total Number of Man Hours Worked*	Hourly Wage Rate	Hours Per Week Full-Time-Men	Hours Per Shift
(a) SULPHURIC ACID PLANT								
1. Acid Maker								
2. Ass't Acid Maker								
3. Burnermen								
4. Chambermen								
5. Ordinary Labor								
(b) SUPERPHOSPHATE PLANT								
1. Millers								
2. Mixers								
3. Den Labor								
4. Ordinary Labor								
(c) DRY MIXING PLANT								
1. Gang Foremen								
2. Scalemen								
3. Bag Loaders & Sewers								
4. General (Inc. loading & shipping)								
(d) NON-DEPARTMENTAL								
1. Watchmen								
2. Mechanics:								
State maximum								
State minimum								

(*) This is the total number of hours worked during the period by the various workmen, for example, 3 gang foremen each working 60 hours per week for 26 weeks would represent 4,680 man hours worked. State the number of dry mixing machines in your factory _____.

Return this form to:

Charles J. Brand, Executive Secretary & Treasurer, 616 Investment Building, Washington, D. C.

NOTE: Manufacturers with sulphuric acid, superphosphate, and dry mixing plants will fill in entire form. Dry mixing plants will fill in only Sections C & D

PAY ROLL ANALYSIS CODE NO. _____ Part 2

Location of Plant _____

Classifications	For the period from July 1, thru Dec. 31, 1932				For the period from Jan. 1, thru June 30, 1933			
	Total Number of Man Hours Worked*	Hourly Wage Rate	Hours Per Week Full-Time-Men	Hours Per Shift	Total Number of Man Hours Worked*	Hourly Wage Rate	Hours Per Week Full-Time-Men	Hours Per Shift
(a) SULPHURIC ACID PLANT								
1. Acid Maker								
2. Ass't Acid Maker								
3. Burnermen								
4. Chambermen								
5. Ordinary Labor								
(b) SUPERPHOSPHATE PLANT								
1. Millers								
2. Mixers								
3. Den Labor								
4. Ordinary Labor								
(c) DRY MIXING PLANT								
1. Gang Foremen								
2. Scalemen								
3. Bag Loader & Sewers								
4. General (Inc. loading & shipping)								
(d) NON-DEPARTMENTAL								
1. Watchmen								
2. Mechanics:								
State maximum								
State minimum								

(*) This is the total number of hours worked during the period by the various workmen, for example, 3 gang foremen each working 60 hours per week for 26 weeks would represent 4,680 man hours worked.

State the number of dry mixing machines in your factory _____.

Return this form to:

Charles J. Brand, Executive Secretary & Treasurer, 616 Investment Building, Washington, D. C.

APPENDIX II

EXHIBIT 19

PRESIDENT'S REEMPLOYMENT AGREEMENT

FERTILIZER INDUSTRY

Substitutions for Paragraphs 2 and 3 of President's Agreement -

Code Reference: Article III, Section 2

Employees (other than factory or mechanical workers or artisans or outside salesmen or watchmen) shall be employed not more than 40 hours per week, averaged over an eight-week period.

Employees engaged in the production of mixed fertilizer and/or superphosphate shall be employed not more than 40 hours per week, nor more than 8 hours per day; provided, however, that employees, during temporary or seasonal emergencies, when there is not a sufficient supply of additional labor available to meet the requirements of production, may be employed not more than 48 hours per week, with the consent of such employees; provided further that such maximum hours shall not exceed a period of more than 4 calendar months in any year.

Employees, in the case of any process requiring continuous operation shall be employed not more than 40 hours, except where competent employees are not readily available, they may be employed not more than 48 hours per week, at the rate of at least time and one third overtime for hours over 8 daily; provided, however, that such employees shall not exceed 10% of the total number of employees in the industry.

Continuous operation is defined as the manufacture of sulphuric acid, phosphoric acid, and superphosphate.

There shall be no limitation on the maximum number of hours for which superintendents, managers, or officials, who now receive more than $35 per week, foremen during rush periods, or emergency maintenance crews required for work in connection with fire, cyclone, flood, or machinery breakdown, may be employed.

Employees in the production of mixed fertilizer and/or superphosphate shall be entitled to one day of rest per week.

Substitutions for Paragraph 6 of President's Agreement -- Code Reference: Article III, Section 3.

Employees shall receive not less than the following rates:

(1) 35¢ per hour in the Northern Area of the United States

(2) 25¢ per hour in the Southern Area of the United States

(3) 35¢ per hour in the Midwestern Area of the United States

(4) 40¢ per hour in the Pacific Coast Area of the United States

provided, however, that where State laws require a higher minimum wage, employees shall not be paid a lower wage than that specified by such State laws. Overtime shall be paid at the rate of one and one third times the normal wage, for all work in excess of 8 hours per day.

The Northern area of the United States is defined as follows: Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, New Jersey, Delaware, Maryland, and West Virginia.

The Southern area of the United States is defined as follows: Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, Texas, and Tennessee.

The Midwestern area of the United States is defined as follows: Ohio, Illinois, Indiana, Kentucky, Missouri, Kansas, Nebraska, South Dakota, Colorado, New Mexico, Arizona, Wyoming, Montana, Michigan, Wisconsin, Minnesota, and Iowa.

The Pacific Coast area of the United States is defined as follows: Washington, Oregon, California, Idaho, Nevada, and Utah.

The minimum rate of pay herein prescribed establishes a guaranteed minimum rate of pay, regardless of whether the employee is compensated on the basis of a time rate or on a piecework performance.

Substitution for Paragraphs 2, 3 and 6 of the President's Reemployment Agreement.

APPENDIX II

EXHIBIT 20

A GENERAL REPORT ON MIXED FERTILIZER COSTS AND SALES PRICES SPRING SEASONS 1933 and 1934 IN THE PRINCIPAL FERTILIZER CONSUMING AREA IN THE UNITED STATES

Prepared in Compliance with a Request from
Capt. Joseph F. Battley, Deputy Administrator, Division 3
National Recovery Administration
by the
Fertilizer Recovery Committee
Washington, D. C.
and submitted
October 26, 1934

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SUMMARY

The figures given in this report are an average of all the grades of the nine "Cost and Sales Price Data" reports previously issued. These grades are:

4-8-7 for Rhode Island, and parts of Massachusetts and New Hampshire
4-8-5 for New Jersey and Eastern part of Pennsylvania (principally)
6-6-5 for Eastern Shore of Virginia
2-8-5 for Central Maryland
3-8-3 for North Carolina
3-8-3 for South Carolina
3-9-3 for Georgia
4-8-4 for Mississippi and Louisiana East of the Mississippi River
2-12-6 for Indiana

The reports disclose that:

Fifty-two firms representing more than 100 plants supplied data.

The consumption of fertilizer in the nine territories surveyed was 2,490,405 tons in 1933.

The consumption of fertilizer in the United States in 1933 was 4,833,940 tons.

The sales of fertilizer of the 52 firms supplying data in the nine territories surveyed was 1,301,000 tons in 1933.

The consumption in the nine territories surveyed, of the grades selected, was approximately 750,000 to 1,000,000 tons in 1933.

When the term "agent's price" is used in this report it refers to the consumer price less the agent's compensation.

A summary of production costs and sales prices in the spring of 1933, as compared with the spring of 1934, is as follows:

	1933	1934	Increase Dollars	Increase Percentage
Average cash price to agents F.O.B. factory	$13,98	$18.68	$4.70	34
Average cost of production	15.50	17.68	2.18	14

The average loss, 1933, was $1.52 per ton, or 10 percent.

The average anticipated profit, 1934, was $1.00 per ton, or 6 percent.

The average cost of materials and bags actually used in this fertilizer offered for sale on March 1, 1934 was $12.35 a ton. To replace these materials on the March 1, 1934 raw material market would have cost an average of $13.37 a ton - an increase of $1.02 a ton, or an increase of 8 percent. While the loss of 10 percent this year, on the basis of replacement cost of materials, [illegible] would have been wiped out and a loss of 2 cents shown.

In order to change the F.O.B. price, factory basis, given above, into the open schedule delivered-to-the-farm price, it is necessary to add average freight of $2.39 a ton, average trucking from railroad station to the farm of 74 cents a ton, and average agent's compensation of $1.56 a ton. This gives a total of $4.69, which is the average cost of distribution. Adding this amount to the average price of $18.68 F.O.B. factory, gives the consumer delivered-to-the-farm cash price of $23.37 a ton which prevailed on March 1, 1934, after discounts had been applied.

The costs given above are based on actual costs for materials, bags, and labor, and include all operating expenses except interest on investment in plant and inventory.

THE REPORT

This report is a summary of the nine "Cost and Sales Price Data" reports, previously issued. The attached map shows the actual areas covered by the survey. They are all heavy consuming territories. The consumption of all kinds of commercial fertilizers in them in 1933 amounted to 2,490,405 tons compared with a consumption for the whole country for 1933 of 4,823,940 tons or slightly more than 50 percent.

These territories are also representative of the general areas in which they are located. They form an excellent cross section of the country East of the Mississippi River, an area which uses over 90 percent of the total consumed in the entire country. The nine territories cover all general farming and most of the special crops.

We estimate that the tonnage of the grades selected for the purpose of the survey amounted in these territories to a consumption between 750,000 to 1,000,000 tons or approximately 35 percent.

Companies Furnishing Cost and Sales Price Data

The data on which this report is based were requested from and furnished by the fifty-two companies which are representative of those operating in the nine territories. They sell slightly more than one-half of the total tonnage of all grades consumed in these territories.

Sales Price Data

The Fertilizer Code went into effect on November 10, 1933. Since it provides for the filing with the Secretary of the National Fertilizer

Association of open price schedules, we have accurate information as to the prices charged by every company for all grades and kinds of fertilizer sold or offered for sale since that date.

All of this information is open to inspection.

Cost Data

Most of the 52 firms which supplied data keep accurate cost records.

Their reports to us are also open to inspection by authorized agencies.

PRICES

Since approximately 35 percent of all the fertilizer used in the nine territories consists of the grades selected for the different territories, these cost figures may be considered very representative.

Delivery Costs

The average cost of delivering fertilizer from producer's plant to consumer's farm in the nine territories is $3.13 a ton.

Quotations

Average prices netted at the factory for the nine territories for which data were obtained are as follows:

PRICES

Table 1 Agents' Quoted Prices and Realized Prices
(Average of Nine Representative Grades of Mixed Fertilizer)
Of The Nine Territories for Which "Cost and
Sales Price Data" Reports were issued.
1933 and 1934

The averages given are "weighted" according to the tonnage consumption of the different territories.

Territory	Zone	Sub-zone	Quoted Price F.O.B. Producer's Plant Spring, 1933	Average realized price* F.O.B. Producer's Plant Spring, 1933	Quoted Price F.O.B. Producer's Plant as of March 1, 1934**
Rhode Island and parts of Mass. and New Hampshire	1	C	24.65	24.11	25.69
New Jersey and Eastern portion of Pennsylvania (principally)	2	D	19.75	16.36	19.36
Eastern Shore of Virginia	3	A (part of)	21.29	17.85	23.89
Central Maryland	3	B	16.34	13.34	16.45
North Carolina	4	C	15.66	12.81	18.02
South Carolina	5		14.50	12.59	17.44
Georgia	6		16.68	13.43	18.55
Mississippi and Louisiana (East of Mississippi River)	8	C	19.64	16.71	21.41
Indiana	10	D	22.27	20.77	24.21
"Weighted" Average			16.56	13.98	18.68

Consumer's delivered-to-the-farm price for any given producer would be actual price F.O.B. plant as given in Table 1 above, plus his average freight, plus the commission he allows the agent.

* After rebates, special discounts, etc.

** Quoted consumer's delivered-to-the-farm price less actual agents' compensation and actual average transportation.

COSTS, SALES PRICES AND PROFIT OR LOSS

The cost, sales price, and profit or loss by territories, for the spring season 1933, and as of March 1, 1934, for the selected grade of mixed fertilizer sold in each territory are shown in Table 2.

Table 2

SUMMARY OF COSTS, SALES PRICES, AND PROFIT OR LOSS

Zone 1 - Subzone C	1933	1934	Increase Dollars	Increase Percentage
Cost at Plant:				
Materials	$12.34	$13.36	$ 1.02	8.2
Bags	1.17	1.76	.59	50.4
Labor: mixing, shipping, etc.	1.21	1.53	.32	26.4
# Other Costs	6.56	6.75	.19	3.0
Total Cost at Plant	21.28	23.40	2.12	10.0
Actual Net Cash (Dealer) Price Received by Manufacturer at Plant	24.11	25.69	1.58	6.5
PROFIT or LOSS	2.83 **	2.29 **	-.54	---
Zone 2 - Subzone D				
Cost at Plant:				
Materials	10.86	11.74	.88	8.1
Bags	.94	1.43	.49	52.1
Labor: mixing, shipping, etc.	1.08	1.41	.33	30.6
# Other Costs	4.82	4.62	-.20	-4.2
Total Cost at Plant	17.70	19.20	1.50	8.5
Actual Net Cash (Dealer) Price Received by Manufacturer at Plant	16.36	19.36	3.00	18.3
PROFIT or LOSS	1.34 *	.16 **	1.50	---

See footnote at end of table
* Indicates loss
** Indicates profit

Zone 3 - Subzone A (part of)	1933	1934	Increase Dollars	Increase Percentage
Cost at Plant:				
Materials	$13.83	$17.45	$3.62	26.2
Bags	.91	1.39	.48	52.7
Labor: mixing, shipping, etc.	1.23	1.77	.54	43.9
# Other costs	3.73	3.73	--	---
Total Cost at Plant	19.70	24.34	4.64	23.6
Actual Net Cash (Dealer) Price Received by Manufacturer at Plant	17.85	23.89	6.04	33.8
PROFIT or LOSS	1.85 *	.45 *	1.40	---
Zone 4 - Subzone C				
Cost at Plant:				
Materials	8.72	10.85	2.13	24.4
Bags	.84	1.25	.41	48.8
Labor: mixing, shipping, etc.	.51	.89	.38	74.5
# Other Costs	3.77	4.09	.32	8.5
Total Cost at Plant	13.84	17.08	3.24	23.4
Actual Net Cash (Dealer) Prices Received by Manufacturer at Plant	12.81	18.02	5.21	40.7
PROFIT or LOSS	1.03 *	.94 **	1.97	---
Zone 5				
Cost at Plant:				
Materials	9.29	10.12	.83	8.9
Bags	.85	1.27	.42	49.4
Labor: mixing, shipping, etc.	.41	.70	.29	70.7
# Other Costs	4.05	4.16	.11	2.7
Total Cost at Plant	14.60	16.25	1.65	11.3
Actual Net Cash (Dealer) Price Received by Manufacturer at Plant	12.59	17.44	4.85	38.5
PROFIT or LOSS	2.01 *	1.19 **	3.20	---

See footnote at end of table
* Indicates loss
** Indicates profit

Zone 6	1933	1934	Increase Dollar	Increase Percentage
Cost at Plant:				
Materials	$10.09	$10.69	$ .60	6.0
Bags	.85	1.30	.45	53.0
Labor: mixing, shipping, etc.	.60	.89	.29	49.0
# Other Costs	4.26	4.52	.26	6.0
Total Cost at Plant	15.80	17.40	1.60	10.0
Actual Net Cash (Dealer) Price Received by Manufacturer at Plant	13.43	18.55	5.12	38.0
PROFIT or LOSS	2.37*	1.15**	3.52	---
Zone 8-Subzone C				
Cost at Plant:				
Materials	11.83	12.18	.35	3.0
Bags	1.13	1.58	.45	39.8
Labor: mixing, shipping, etc.	.62	.86	.24	38.7
# Other Costs	5.07	5.00	.07	-1.4
Total Cost at Plant	18.65	19.62	.97	5.2
Actual Net Cash (Dealer) Price Received by Manufacturer at Plant	16.71	21.41	4.70	28.1
PROFIT or LOSS	1.94*	1.79**	3.75	---
Zone 10 - Subzone D				
Cost at Plant:	13.67			
Materials	13.67	14.03	.36	2.6
Bags	1.13	1.69	.56	49.6
Labor: mixing, shipping, etc.	.85	1.01	.16	18.8
# Other Costs	6.18	6.27	.09	1.5
Total Cost at Plant	21.83	23.00	1.17	5.4
Actual Net Cash (Dealer) Price Received by Manufacturer at Plant	20.77	24.21	3.44	16.6
PROFIT or LOSS	1.06*	1.21**	2.27	---

Includes tax tags; light, power, fuel; taxes; depreciation on physical property at income tax rates; office, sales, and administrative expenses; bad debts; insurance; etc.

* Indicates loss
** Indicates profit

Territories - Combines	1933	1934	Increase Dollars	Increase Percentage
Cost at Plant:				
Materials	$ 9.77	$11.02	$ 1.25	13
Bags	.88	1.33	.45	51
Labor: mixing, shipping, etc.	.61	.93	.32	52
Other Costs	4.24	4.40	.16	4
Total Cost at Plant				
Actual Net Cash (Dealer) Price Received by Manufacturer at Plant	13.98	18.68	4.70	34
PROFIT or LOSS	1.52*	1.00**	2.52	--

Includes tax tags; light, power, fuel; taxes; depreciation on physical property at income tax rates; office, sales, and administrative expenses; bad debts; insurance; etc.

* Indicates loss
** Indicates profit

Table 3
COST OF FERTILIZER MATERIALS

Material	Price March 1 1933	Price March 1 1934	Increase in Dollars	Per cent Increase
Ammonium sulphate, domestic, cwt. bulk /	$1.00	$1.25	$ .25	25.0
Calcium Cyanamid, bags, unit of N **	1.18	1.30	.12	10.6
Sodium nitrate, crude, bags, cwt.*	1.29	1.35	.05	4.2
Cottonseed meal, 41 percent Memphis, ton	12.00	24.00	12.00	100.0
Tankage, 10 & 15 percent Chicago, ton	11.50	24.50	13.00	113.0
Superphosphate, bulk run-of-pile, unmilled & unscreened - per ton basis, 16 percent Baltimore	6.00	7.50	1.50	25.0
Ground bone - 1½ percent ammonia, Chicago, ton	14.00	16.00	2.00	14.3
Manure salt - 20 percent K_2O, bulk, ton*	12.00	12.00	None	None
Muriate of potash, 48-85 K_2SO_4, bulk, ton*	37.15	37.15	None	None

/ Ex vessel at ports, March shipment
* Ex vessel at ports
** Freight allowed various destinations, in carload lots for March shipment

CONCLUSIONS

The average cash-realized price to agents F.O.B. producers' plants for fertilizer sold in the nine territories surveyed increased from $13.98 a ton for the spring season of 1933 to $18.68 a ton as of March 1, 1934. This increase amounts to $4.70 a ton, or 34 percent.

The principal reasons for this increase in price are:

1. That materials for a ton of fertilizer had increased $1.25, or by 13 percent;
2. That bags for a ton of fertilizer had increased 45 cents, or by 51 percent;
3. That labor for a ton of fertilizer had increased 32 cents, or by 52 percent;
4. That last year fertilizer sold at $1.52 below cost (not including any interest or investment);
5. That other manufacturing and distributing costs had increased 16 cents, or by 4 percent;

All these items together aggregate $3.70 a ton. The average anticipated profit for 1934 was $1.00 a ton, thus accounting for the total of $4.70.

Less than 7 percent of the increased price is due to increased direct labor costs under the National Recovery Administration.

All our figures are open to inspection and verification of authorized agencies, and any additional information desired will be obtained and furnished on request.

Respectfully submitted,

FERTILIZER RECOVERY COMMITTEE

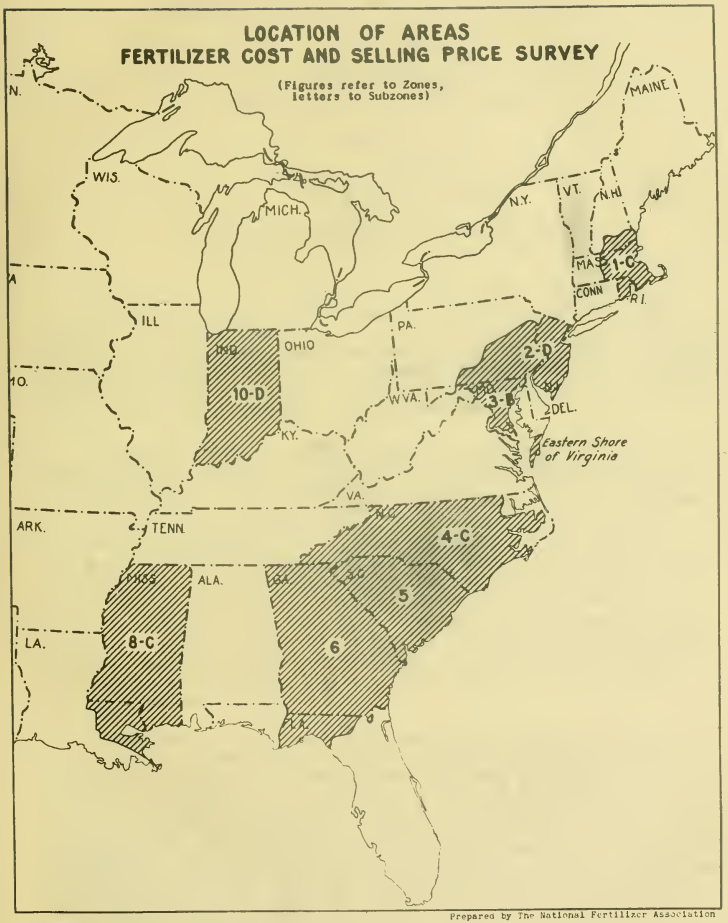
By: Charles J. Brand
Executive Director

District of Columbia, ss.

Before me, a Notary Public in and for the District of Columbia, personally appeared Charles J. Brand, Executive Director of the Fertilizer Recovery Committee, who, being duly sworn, deposes and says that the facts contained in the foregoing statement are true and correct, to the best of his knowledge and belief.

Sworn and subscribed to in my presence this 26th day of October, 1934.

Notary Public


LOCATION OF AREAS
FERTILIZER COST AND SELLING PRICE SURVEY
(Figures refer to Zones, letters to Subzones)
N.
WIS.
MICH.
N.Y.
VT.
N.H.
MAINE
MASS.
1-C
CONN.
R.I.
ILL.
PA.
IND.
OHIO
2-D
10.
10-D
W.VA.
3-B
DEL.
KY.
Eastern Shore of Virginia
VA.
ARK.
TENN.
N.C.
4-C
MISS.
ALA.
S.C.
5
GA.
LA.
8-C
6
FLA.
Prepared by The National Fertilizer Association

APPENDIX II

EXHIBIT 21

DEVELOPMENT AND APPLICATION OF UNIFORM COST ACCOUNTING SYSTEMS IN THE FERTILIZER INDUSTRY

Presented by
JOHN MORAN, C.P.A.,
Cost Accountant
THE NATIONAL FERTILIZER ASSOCIATION

Washington, D. C.
at the
SIXTEENTH INTERNATIONAL COST CONFERENCE
Under the Auspices
of the
NATIONAL ASSOCIATION OF COST ACCOUNTANTS
At Boston, Massachusetts, June 25, 1935

As long ago as 1906 the proceedings of the annual convention of the National Fertilizer Association contained this statement "The question of figuring costs was also discussed and a committee was appointed to investigate and formulate economical methods for figuring costs." Recommendations of this committee are not available but the proceedings of the convention of 1908 report the publication and distribution of a booklet entitled "Cost Accounting."

Ten years later, in 1916, another cost accounting committee reported details as to a uniform system of cost accounting. It was not until 1924, however, that a comprehensive cost accounting system was developed. A cost accounting committee, headed by B.A. McKinney of F.S. Royster Guano Company, Norfolk, Virginia, was authorized, in 1921, to investigate cost finding methods in the fertilizer industry and to make recommendations as to a uniform system of cost finding. As a result of the work of this committee, a manual entitled "Cost Accounting and Cost Estimating for Dry Mixers of Fertilizers" was published in 1924. In 1926 another manual entitled "Cost Accounting and Cost Estimating for Plants Producing Sulphuric Acid and Superphosphate" was published. In 1927 "A Manual of Accounting for Dry Mixers of Fertilizers", bringing up to date the 1924 edition, was completed.

Producers in the fertilizer industry fall into two classes - dry mixers and wet mixers. Dry mixers who operate approximately 1,000 plants, are engaged in assembling raw materials and mixing them into complete fertilizers. A wet mixer manufactures superphosphate in addition to preparing mixed fertilizers. Some wet mixers also produce sulphuric acid which is used in making superphosphate. There are approximately 200 plants that manufacture superphosphate and mixed fertilizer. Of that number 106 also manufacture sulphuric acid. Superphosphate is the most important fertilizer material and amounts to slightly more than one-half of the total amount of all fertilizer materials used in mixed fertilizer and it is also applied to the soil separately. It is the principal source of phosphoric acid and is mixed

with materials supplying nitrogen and potash to form a complete mixed fertilizer.

The industry is composed of approximately 800 companies with capitalization of a single company running as low as $5,000 and as high as $50,000,000. Perhaps 50 per cent of the companies do an annual volume of fertilizer business of less than $50,000. It is estimated that the total investment in the fertilizer industry amounts to approximately $300,000,000.

The adoption of the Code of Fair Trade Practices for the Fertilizer Industry in 1927 gave cost accounting work added impetus. Under the direction of W. B. McCloskey, now associated with The Davison Chemical Company and a member of the Baltimore chapter of the National Association of Cost Accountants, the work of installing uniform accounting systems progressed rapidly. A number of firms manufacturing perhaps 50 per cent of the total volume of mixed fertilizer, adopted and installed during 1928, 1929, and 1930 the uniform systems published by the Association.

From 1930 to the time when the National Industrial Recovery Act was enacted, there was in our industry the same lethargy in cost accounting work that existed in most other industries.

The code of fair competition for the fertilizer industry was approved by the President on October 31, 1933 and became effective November 10, 1933. It contained a provision that prohibited the sale or offer for sale by any producer of mixed fertilizer, superphosphate, and/or other fertilizer material at a price below his cost except to meet existing competition, the term "cost" meaning the cost determined in accordance with uniform methods of accounting to be prescribed by the Code Authority with the approval of the National Recovery Administration.

Early in November, 1933, the cost accounting committee of The National Fertilizer Association, consisting of eleven auditors and cost accountants in the fertilizer industry, three of whom were certified public accountants, held an extended session reviewing the cost accounting methods of the industry. It was early evident in these discussions that certain cost elements heretofore included in the cost manuals would not be approved by the National Recovery Administration. Notable in this connection was the provision for interest on investment in plants and inventories.

It was also plain to the members of the committee that if an effective uniform accounting method was to be used by all members of the industry, such a method must be reduced to the simplest terms. Taking as a working basis the two cost manuals most recently published, it was decided to set up what we have called digests of cost accounting manuals. Following the procedure of having one manual for the dry mixer and one manual for the wet mixer, two separate cost digests were accordingly prepared.

These digests contained the bases for cost elements and a complete series of the necessary cost statements. Separate cost forms were also provided and sold to members of the industry.

The digests contained a complete description of each of the expense classifications. The cost elements were so classified and described as to make it easy for any producer to prepare the cost statements from his book of accounts whether or not the book of accounts followed the uniform cost system.

The fertilizer business is a distinctly seasonal one. In the twelve Southern States where normally 70 percent of the entire United States fertilizer tonnage is consumed, from 80 to 85 percent of the annual output moves in a four-month period running from about the middle of January to about the middle of May. Actual cost can not be computed until the end of the season when it is known just how many tons of fertilizer were produced and sold. Both the factory overhead and the selling and administrative overhead are materially affected by the volume. Briefly, the overhead cost per ton is arrived at by the division of the expenses by the number of tons produced and sold.

In order, therefore, to have a practical working basis for the current season it was decided that the tonnage for the current year should be estimated to be the average of the tonnage for the three preceding fiscal years. This was the basis for the application of the factory overhead. However, for selling and general and administrative expense overhead, the tonnage for the current year was estimated to be the same as the tonnage for the preceding year.

The distinction between the tonnage basis for factory overhead based on a three-year average and the selling and administrative overhead based on one year, rests upon the theory that selling and administrative expenses in times of reduced output can be more readily reduced than in the case of factory overhead items such as insurance, taxes, and depreciation.

The digest provides that cost of materials shall be computed at the combined average of the actual cost of the materials in the plant and of commitments or contracts made as at the time the cost computations are made or the price schedule filed. Materials manufactured by the producer shall be computed at the actual cost of manufacturing and not at the market price.

As to direct labor the digest prescribed, based on experience of the previous year and taking into consideration the new code labor rates, that the estimated labor cost be included in the cost statement.

Because of the varying percentages used by individual firms and because of the recognition by the National Recovery Administration of the reasonableness of the depreciation rates used by producers in filing federal income tax returns, it was decided that each producer should use the same rates of depreciation in preparing his cost statements as were used in preparing federal income tax returns. In our many discussions with representatives of the Consumers' Advisory Board, theDivision of Planning and Research, and Legal Division of the National Recovery Administration, this feature of the cost digest required the least time and discussion before approval by the National Recovery Administration.

One of the interesting discussions with representatives of the Consumers' Advisory Board was in connection with the inclusion of selling and administrative expense as a part of cost. The views of industry cost accountants and of business men in the industry were that selling and general administrative expenses were rightfully elements of cost. The Consumers' Advisory Board took the position that such items as salesmen's salaries, advertising, and officers' salaries, should not be considered as cost elements, particularly where industry codes contained prohibitions of sales below cost. They also held the view that the consumer should not be compelled to bear any part of such expenses as salesmen's salaries and advertising, because these were outlays made by competitors in getting business away from one another. It would be difficult to convince any business man in the fertilizer industry that selling and administrative expenses are not a part of his cost.

In the case of idle or substantially idle plants it was provided that relatively fixed factory expenses such as depreciation on machinery and buildings, property taxes, fire insurance, and factory rent should only be charged against the cost of production in each plant for the year 1933-1934 in the ratio that the annual average production in the industry for the three preceding years bears to the production in the industry for the banner year 1929-1930. This ratio was 60 per cent and in so-called idle or substantially idle plants only 60 per cent of such factory items as depreciation, taxes, and fire insurance, was charged to the cost of production for the year 1933-1934.

This provision was included at the insistence of the Division of Economic Research and Planning of the National Recovery Administration. I might state that there has been in the industry for years a plant overcapacity of approximately 50 per cent. The largest tonnage of fertilizer ever produced in the United States occurred in 1930 when approximately 8,300,000 tons were sold. In 1931 the consumption had dropped to 6,300,000 tons and in 1932 it dropped to less than 4,400,000 tons. For 1933 there was a gain of approximately one-half million tons, and for 1934 there was a further gain of approximately 700,000 tons bring the 1934 production up to 5,500,000 tons. For the current year, 1935, it is expected that the consumption will run as high as 6,300,000 tons. The average for the five years 1925-1929 was 7,500,000 tons. I quote these figures at this point to show the basis for the idle plant provision just discussed.

One of the provisions which appeared in the cost manuals and which was disapproved by the National Recovery Administration, was the provision for the inclusion in cost of a reasonable amount to take care of the salaries of persons operating or managing their own plants. This provision was suggested both from the standpoints of sound accounting and of fair competition. It failed to be included in the cost digests principally because it was hard to define what was a reasonable amount.

I shall not burden you with further detail of the technical questions surrounding the completion of the cost accounting methods.

Sufficient to say, hours of discussion were spent on such items as depreciation, idle plant, spreading of factory and selling overhead. It is my firm conviction that if it were not for the fact that we had the cost accounting manuals to serve as a working basis when we met in November, 1933, the cost accounting committee would still be working on a uniform accounting method that would meet with the approval of the industry and the former National Recovery Administration. As it was, our uniform accounting method as devised by the cost accounting committee, was sent in mimeographed form in January, 1934, to every producer in the industry and only minor changes were made before it was submitted to the National Recovery Administration. We had numerous conferences with the various boards of the National Recovery Administration and finally on February 23, 1934, the Cost Digests and Cost Manuals were approved by General Johnson to become effective two weeks later. The cost digests were printed and a free copy was sent to every producer in the industry. We also instituted a campaign of cost accounting education. Almost every week an item urging producers to figure their costs, was carried in the order to install a uniform accounting system. In a large number of cases the system in use can be and is modified to follow the set-up of the uniform accounting method. Also the difficulty of selling our uniform system of accounts to producers relates at least partially to the fact that many producers because of the seasonal nature of the fertilizer business and their desire to make their plant facilities and personnel productive in the off-season, are devoting more attention to other lines of endeavor than they are devoting to producing fertilizer. Peculiarities in the lay-out of plants, division of responsibility of personnel, and connections with other lines of business force slight deviations from the uniform accounting methods. The idea we always keep in mind is sound accounting. It is realized that there must be some deviations from the standard set-up in certain cases. Where conditions are normal, however, the uniform accounting methods are completely followed.

To be effective it is not enough merely to install a uniform accounting system and see it started. One of the most important duties is to cause the manufacturer to become cost conscious and to encourage him and his office force in the work of making frequent cost analyses. We have attempted to promote this type of work by annual cost studies wherein the cost figures of individual firms are tabulated under a secret code number. The comparative statement of costs by geographical areas is released only to those members that participated in the work. In addition to showing in tabular form the cost of individual firms, the weighted average cost for each geographical area is also shown for comparative purposes.

The firms that have installed the uniform accounting methods serve as a nucleus in these studies but we often get the cooperation of members who have not installed the uniform cost system. It has been my experience and I am quite sure that it was also the experience of my predecessor, that the matter of a wider adoption of uniform cost accounting methods is almost entirely a matter of salesmanship. It can not be carried on entirely by mail. The accountant must visit the plants of prospective users and sell the idea. One reason that in our industry so few accounting systems have been installed in the last several years in the fact that we have been unable to devote the

necessary time to this feature of the work. It is our intention, however, in the near future to emphasize this work.

As to the future of uniform cost accounting methods in the industry, it is my opinion that members are more interested than ever before. I am confident that the only way to keep this interest alive is by constant educational work and frequent visits by the staff accountant of the Association with the members in their plants. For more than ten years the Association has had on its staff a certified public accountant experienced in the accounting problems of the fertilizer industry. I believe that the present is a psychological moment to follow up the ground-work of the last several years. I believe that the uniform accounting methods that we have in our industry will be useful in any voluntary agreement that members of the industry will be useful in any voluntary agreement that members of the industry might enter into, or any concerted action that the industry may take with the view of eliminating unfair trade practices.

APPENDIX II

Registry No. 4

EXHIBIT 22

NATIONAL RECOVERY ADMINISTRATION

Title A (Labor Provisions) of Proposted Voluntary Agreement for the FERTILIZER INDUSTRY

Set for Public Hearing November 8, 1935

The labor provisions of a voluntary agreement for the Fertilizer Industry in the present form merely reflect the proposal of the above-mentioned Industry, and none of the provisions contained therein are to be regarded as having received the approval of the National Administration as applying to this Industry.

FERTILIZER INDUSTRY

Voluntary Agreement as to Labor

Each of the undersigned members of the fertilizer industry, in consideration of the agreement of other members of the fertilizer industry and in further consideration of mutual agreements herein contained, pursuant to the provisions of Section 4(a) of the National Industrial Recovery Act as extended, and subject to the approval of this agreement by the President of the United States, does hereby agree with the other undersigned members of the fertilizer industry and with each of them to abide by and to observe, in their capacity as employers in the fertilizer industry, the terms, conditions, and provisions hereinafter set forth.

Section 1. Collective Bargaining

Pursuant to Section 7 (a) of the National Industrial Recovery Act as extended:

A. Employees shall have the right to organize and bargain collectively through representatives of their own choosing, and shall be free from the interference, restraint, or coercion of employers of labor, or their agents, in the designation of such representatives or in self-organization or in other concerted activities for the purpose of collective bargaining or other mutual aid or protection.

B. No employee and no one seeking employment shall be required as a condition of employment to join any company union or to refrain from joining, organizing, or assisting a labor organization of his own choosing.

Section 2. Maximum Hours of Labor

A. No party to this agreement, in his capacity as a member of the

fertilizer industry, shall require or permit any of his employees to work more than 40 hours in any one week or more than eight hours in any one day, except as follows:

1. Officials, managers, superintendents, salesmen, chemists, foremen, and watchmen.

2. During the rush of the planting season, the hours of labor may exceed the maximum above prescribed by eight hours a week, and in the case of skilled key men the hours of labor may exceed the maximum above prescribed by 20 hours in any week, but as to each such weekly excess above 40 hours each employee's hours of labor shall be averaged to not more than 40 hours a week, before four months have elapsed, or, if he remains employed for less than four months, then such excess shall be so averaged during the period of his employment. No employee shall be classed as a skilled key man unless such employee is paid during the rush of the planting season at a rate at least 50 percent greater than the minimum hourly rate specified in Section 2 of this Article.

3. Office employees, except those specified in sub-paragraph 1 of this paragraph, shall not be required or permitted to work more than an average of 40 hours a week, and as to each weekly excess above 40 hours each employee's hours of labor shall be averaged to not more than 40 hours a week before four months have elapsed, or, if he remains employed for less than four months, then such excess shall be so averaged during the period of his employment.

4. Employees engaged in any continuous operation, including the loading and unloading of vessels, when other competent employees are readily available for such work shall not be required or permitted to work more than 40 hours in any one week, and, except in the loading and unloading of vessels, in no case more than 48 hours in any one week.

5. Repair and shop crews, engineers, and electricians shall not be required or permitted to work more than 40 hours in any one week, with a tolerance of 10 percent, except in case of emergency, and except as provided in subparagraph 2 of this paragraph, and in the latter event an employee's hours of labor shall be averaged as provided in such subparagraph to the maximum hours of labor permitted in this subparagraph.

B. Overtime shall be paid each employee at the rate of one and one-third times his normal rate for all work in excess of eight hours a day, except in the case of office employees and those employees specified in Paragraph A, Subparagraph 1 of this Section.

C. Every employee in the fertilizer industry shall have one day of rest a week.

Section 3. Minimum rates of Pay.

A. No party of this agreement, in his capacity as a member of the fertilizer industr , shall:

Pay any employee in the Northern area less than 35 cents an hour;
Pay any employee in the Southern area less than 25 cents an hour;
Pay any employee in the Midwestern area less than 35 cents an hour;
Pay any employee in the Pacific Coast area less than 40 cents an hour;
Pay any employee in Puerto Rico less than 20 cents an hour; except that

1. Office boys less than 18 years of age and watchmen shall not be paid less than 75 percent of the minimum rates specified in this paragraph.

2. Those persons whose earning capacity is limited because of age, physical or mental handicap, or other infirmity may be employed on light work at wages below the minimum provided in this paragraph.

B. The Northern area comprises Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, New Jersey, Maryland (except the Eastern Shore), Newcastle County of Delaware, District of Columbia, and West Virginia.

C. The Southern area comprises Kent and Sussex Counties of Delaware, the Eastern Shore of Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, Texas, and Tennessee.

D. The Midwestern area comprises Ohio, Illinois Indiana, Kentucky, Missouri, Kansas, Nebraska, South Dakota, North Dakota, Colorado, New Mexico, Arizona, Wyoming, Montana, Michigan, Wisconsin, Minnesota, and Iowa.

E. The Pacific Coast area comprises Washington, Oregon, California, Idaho, Nevada and Utah.

Section 4. Child Labor Prohibited

No person under the age of 16 years shall be employed in the fertilizer industry.

Section 5. Reclassification of Functions Prohibited.

There shall be no evasion of this agreement by reclassification of the functions of employees. An employee shall not be included in any of the exceptions set forth above unless the identical functions were identically classified 60 days prior to the effective date of this agreement.

Section 6.

Within each State, members of the industry shall comply with any

laws of such State imposing more stringent requirements, regulating the age of employees, wages, or hours of work.

Section 7. Pursuant to the provisions of subsection (b) of Section 10 of the National Industrial Recovery Act as extended, this agreement and all the provisions thereof are made subject to the right of the President of the United States at any time to cancel or modify his approval of this agreement or any conditions imposed by him upon his approval thereof.

Section 8. Duration of Agreement

A. This agreement shall become effective when executed by members of the fertilizer industry having 90 percent of the capacity of the fertilizer industry as indicated by records of the National Fertilizer Association and upon its approval of the President of the United States.

B. If any of the terms, conditions, or provisions of this agreement are altered or modified pursuant to Section 7, any party to this agreement may cease to be a party by filing with the Executive Secretary of The National Fertilizer Association a written notice of withdrawal and, if the members of the fertilizer industry remaining parties to this agreement do not have 85 percent of the capacity of the fertilizer industry as indicated by records of The National Fertilizer Association, then this agreement shall become void and of no effect.

C. On and after April 1, 1936, any party to this agreement may cease to be a party by filing with the Executive Secretary of The National Fertilizer Association a written notice of withdrawal and, if the members of the fertilizer industry remaining parties to this agreement do not have 75 percent of the capacity of the fertilizer industry as indicated by records of The National Fertilizer Association, then this agreement shall become void and of no effect.

D. The Executive Secretary of the National Fertilizer Association shall notify each party of this agreement of the withdrawal of any other party.

E. The Executive Secretary of The National Fertilizer Association shall notify each party to this agreement when the members of the fertilizer industry remaining parties to this agreement do not have, according to records of the National Fertilizer Association, the percentage of the capacity of the fertilizer industry specified in Paragraph B or in Paragraph C of this section.

Section 9.

A. This agreement may be signed and delivered in as many duplicate originals as may be desirable or convenient, and all such executed duplicate originals shall be deemed parts of this agreement.

B. Any member of the fertilizer industry not a party to this agreement at the time it becomes effective in accordance with the provisions

of Section 8, Paragraph A, may thereafter become a party to this agreement in the same manner and with the same duties, and obligations as if he had been an original party to this agreement.

C. This agreement shall be delivered to the Executive Secretary of The National Fertilizer Association, who shall be the custodian thereof.

_____
(Date)

_____
(Name of Member)

By_____
(Authorized officer or representative)

_____
(Title)

Address:

_____

_____

_____

APPENDIX II

EXHIBIT 23

Essential Differences between the Provisions of the Proposed Voluntary Labor Agreement and those in the former Code of Fair Competition for the Fertilizer Industry

The Sections relating to Section 7-a of the National Industrial Recovery Act as extended were substantially the same as the language of Section 7-a of the Act with the exception that Provision c of Section 1, Article IV of the Code was omitted from the proposed Voluntary Agreement. It was explained by Mr. Murphy (*). All members of the Industry did not have to do so assent to this agreement if in addition to the hours and wages they agreed to, they also had to agree to abide by other undefined hours and wages.. Mr. Allen Moore, of the Legal Advisory Board, felt that the inclusion of sub-section c was not necessary from a legal point of view.

The first notable change from the Code is in Section 3, sub-section a-1 where watchmen were added to the list of semi-official employees exempted from the maximum hours of labor provisions of Section 2-a. Mr. Hockley, of the Davison Chemical Company, (**) explained that in many instances watchmen were employees who had been incapacitated for other work or who preferred light work, and should be considered more like firemen in public work where they worked longer hours than the ordinary class of employee but did not have any difficult work to perform.

Section 2, Sub-section a (2) The Industry added to this Section a qualification for "skilled key-men" which is an improvement over the Code and stated:

> "No employee shall be classed as a skilled key-man, unless such employee is paid during the rush of the planting season at a rate at least 30% greater than the minimum hourly rate specified in Section 3 of this Article."

A further change was made in this Section and the language of the Code "over any consecutive four-months' period" was changed by the Industry to read:

(*) Transcript of Public Hearing on Title A (Labor Provisions) of Proposed Voluntary Agreement for the Fertilizer Industry, November 8, 1935, Jesse L. Ward, Publisher, Washington, D. C., page 94.

(**) Ibid, page 96.

> "But as to each such weekly excess above forty hours, each employee's hours of labor shall be averaged to not more than forty hours a week before four months have elapsed, or, if he remains employed for less then four months, then such excess shall be so averaged during the period of his employment."

This was an attempt on the part of the Industry to incorporate into the Agreement Interpretation #67-34 which had been made during existence of the Code covering this point. It does clarify it in the case of part-time employees, but on the other hand it opens up for the Industry an opportunity to split peak seasons by the elimination of the phrase "over any consecutive four-months' period."

Section 2, Sub-section a (3) differs from the Code in that it also contains what the Industry thought was a clarification of language similar to the clarification discussed in Section 2, Subsection a-2, and in addition added a statement which made it clear that those classes of workers specified in sub-paragraph 1 of Section 2-a, namely officials, managers, superintendents, salesmen, chemists, foremen, and watchmen were not meant when the provisions regarding present employees were discussed.

Section 2-a 4 was substantially the same as the codal provision except that it permits workers engaged in the loading and unloading of vessels to work unlimited hours. The justification for this provision as explained by Mr. Hockley (*) is that bad weather often prevents the unloading of a vessel during part of the "free time" because of the possibility of damage to the materials, and that when unloading becomes possible it should proceed undisturbed as rapidly as possible.

From Section 2-a 5 watchmen have been removed and added to Section 2-a 1 as above discussed and to this Section was also added

> "And except as provided in subparagraph 2 of this paragraph, and in the latter event an employee's hours of labor shall be averaged as provided in such subparagraph to the maximum hours of labor permitted in this subparagraph."

Section 2-b added "and those employees specified in Paragraph A, Subparagraph 1 of this Section." This makes it plain that the Industry had never contemplated paying time and one-third to officials, managers, superintendents, salesmen, chemists, foremen, and watchmen for any over-time they might put it.

Section 2, paragraph c, is a distinct improvement over the language of the Code and reads:

> "Every employee in the Fertilizer Industry shall have one day of rest a week."

(*) Ibid pp. 88.

This makes the day of rest mandatory whereas the Code said:

> "Every employee in the Fertilizer Industry shall be be entitled to one day of rest a week."

To be entitled to a thing is not to have it, and the Industry made a good point in improving this language.

Section 3-a on minimum rates of pay in the proposed Voluntary Agreement is the same as the Code except that two exceptions were added:

> "Sub-section 1.- Office boys less than 18 years of age and watchmen shall not be paid less than 75% of the minimum rates specified in this paragraph."

> "Sub-section 2.- Those persons whose earning capacity is limited because of age, physical or mental handicap, or other informity may be employed on light work at wages below the minimum provided in this paragraph."

The last Sections of the proposed Voluntary Agreement dealing with the divisions of territory for the various areas for which the various rates of wages were to be paid was the same as the Code but invoked some discussion at the Hearing because certain interests protested the inclusion of Kentucky in the mid-western zone.

Section 4 incorporated the language of the Code in prohibiting child labor. It should be noted here that the provisions of the Model Code had been agreed upon by the Industry providing they could have been inserted into the Code without reopening the Code for public hearing.

Section 5, on Reclassification of Functions Prohibited, is substantially the language of the Code except that the dates after which reclassification could not occur is set at 60 days prior to the effective date of the proposed Agreement. It was suggested that this date be extended back to a time when Code standards were known to be in effect. It was also developed by Mr. Hockley (*) that this reclassification pertains to a position rather than to an employee, and that the language could be improved by so wording, in place of functions which is ambiguous.

(*) Ibid, pp. 193

EXHIBIT 24

Consumption of Fertilizer in the United States from 1920 to 1930

(Based on fertilizer tag sales or sales records or estimates as shown in footnotes)
(Short tons by calendar year except as indicated)

	Five-year average 1910-1914	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930
New England	251,490	351,421	319,389	347,486	345,709	366,783	389,854	310,700	383,147	386,119	366,048	374,840
Maine	113,760	168,000[1]	151,818[1]	172,000[1]	168,000[1]	182,000[1]	188,000[1]	147,000	183,750	178,750[2]	185,850	195,850
New Hampshire[2,1]	18,050	17,000	14,000	15,000	17,000	16,000	18,000	14,650	16,878	16,900	16,900	17,000
Vermont	13,040	20,000[1]	15,000[1]	16,000[1]	18,000[1]	17,000[1]	18,000[1]	14,000[1]	16,883	16,911	14,901	16,089
Massachusetts[2]	48,140	61,421	61,018	66,986	68,709	81,088	82,866	58,920	71,784	70,458	67,481	64,821
Rhode Island[3]	7,300	10,000	8,000	8,500	9,000	8,500	9,000	8,100	10,128	10,100	10,100	10,200
Connecticut	54,200[3]	75,000[3]	70,000[1]	70,000[1]	70,000[1]	70,000[1]	70,000[1]	68,000[1]	84,524	72,000[1]	68,000[1]	68,000[1]
Middle Atlantic	962,068	1,017,292	921,185	983,287	918,338	940,947	978,629	947,414	977,949	1,007,284	880,230	1,008,486
New York	257,580[2]	250,000[2]	230,000[2]	250,000[2]	250,000[2]	260,000[2]	268,000	234,000	260,000	260,000[2]	250,000[2]	250,000[2]
New Jersey[4]	142,418	164,821	163,487	146,424	157,497	162,827	146,996	135,141	141,855	143,574	141,951	156,446
Pennsylvania	331,123	332,325	321,294	322,216	308,742	319,165	328,462	328,904	328,214	330,984	332,886	332,000[2]
Delaware	36,600	61,735	37,472	40,344	36,931	36,224	41,006	43,084	41,128	40,817	41,000	43,000
Maryland	163,670[4]	172,410	140,062	166,188	165,168	151,211	168,474	163,285	165,174	173,159	108,443	177,021
West Virginia[2]	30,680	35,400	28,870	38,071	40,000	40,900	41,000	43,000	43,500	49,750	49,700	50,000
Southern	4,395,280	4,941,224	2,912,313	3,617,035	4,337,603	4,592,186	5,062,439	5,150,666	4,565,588	5,580,571	5,516,070	5,612,660
Virginia[2]	385,353	465,247	360,400	449,942	422,356	441,495	451,656	435,228	408,008	437,700	428,886	449,178
North Carolina[2]	730,252	1,170,400	690,544	991,174	1,066,553	1,183,653	1,217,822	1,210,176	1,171,499	1,349,860	1,293,672	1,242,038
South Carolina[2]	884,826	1,099,487	598,993	625,599	693,386	844,440	978,256	840,128	726,736	788,293	760,068	749,230
Georgia[2]	1,146,294	1,003,953	535,630	521,547	675,867	678,959	778,809	799,302	713,047	888,274	888,911	928,606
Florida[2]	199,709	262,851	230,618	263,769	398,664	365,317	358,463	398,480	417,458	464,967	427,224	487,824
Alabama[2]	456,929	371,860	168,239	284,870	447,913	456,640	598,115	615,364	478,400	681,100	675,450	643,700
Mississippi[2]	131,235	131,084	61,246	142,617	208,995	206,122	268,028	278,673	218,750	333,350	327,806	403,718
Tennessee[2]	75,730	96,535	64,010	89,619	106,361	115,230	142,174	156,338	112,473	160,728	142,745	163,909
Missouri[2]	47,326	92,737	51,502	50,021	51,597	47,121	63,939	56,891	56,100	64,922	58,892	59,910
Arkansas[2]	51,370	77,550	22,225	36,115	79,616	96,760	123,387	128,175	78,497	126,592	126,552	157,248
Louisiana[2]	88,880	110,765	36,284	75,050	104,624	124,666	110,784	114,347	92,466	143,693	174,278	178,560
Texas[2]	86,977	139,405	21,422	93,912	74,787	127,791	101,006	126,150	80,621	144,643	192,138	146,218
Oklahoma	1,500[2,5]	4,000[2,5]	2,000[2,5]	2,500[2,5]	3,600[2,5]	4,000[2,5]	5,000[2,5]	6,418[2,5]	4,263[2,5]	8,202[5]	9,422[2,5]	6,512[5]
Mid West	477,582	783,157	625,316	733,883	723,466	743,656	807,530	795,484	816,914	880,854	954,889	936,624
Ohio	165,552	300,000	255,000	310,895	303,120	321,287	321,966	304,480	312,703	320,966	338,662	327,179
Indiana	177,654	231,791	187,023	209,310	194,584	192,417	226,146	228,240	240,498	271,082	260,201	224,065
Illinois	6,200[2]	18,000[2]	12,000[2]	13,707	16,719	17,627	24,582	25,227	26,000[2]	30,569	38,056	40,818
Kentucky	69,200	90,000	62,000	65,000	60,000	65,000	93,000	91,500	70,500	93,000	93,000	114,000
Michigan	48,786[2]	112,616	83,466	86,281	83,645	94,675	109,327	105,014	117,227	150,213[2]	162,812[2]	150,000[1]
Wisconsin	3,360	12,000	13,000	14,000	15,000	15,000	12,500	16,000	22,520	33,041	40,671	51,222
Minnesota	1,000[2]	5,000[2]	4,000[2]	6,000[2]	7,000[2]	8,000[2]	9,000[2]	11,743	11,887	14,211	13,024	16,500
Iowa		3,500[2]	3,000[2]	3,500[2]	4,000[2]	4,500[2]	6,000[2]	6,621[2]	7,181[2]	10,000[2]	17,000[2]	24,597[2]
Kansas	4,510	12,650[2]	4,303[2]	4,500[2]	4,000[2]	4,500[2]	4,134[2]	7,746	7,500[2]	9,162	9,243[2]	6,353[2]
Nebraska[2]		500	400	450	500	500	500	500	508	600	700	1,000
South Dakota[2]		200	100	125	150	150	150	150	200	220	250	250
North Dakota		200[2]	1254	125	150[2]	200[2]	225[2]	250	300	450[2]	500[2]	540[2]
West	48,511	80,360	84,719	88,274	87,199	83,354	106,913	117,665	129,601	151,241	163,807	177,666
Montana								50[2]	90[2]	100[2]	100[2]	100[2]
Wyoming[2]							100	150	200	300	600	650
Idaho[2]		300[2]	300[2]	300[2]	400[2]	400[2]	400[2]	420[2]	450[2]	600[2]	550[2]	1,250[2]
Colorado		250[2]	200	200[2]	250[2]	250	250[2]	337	60[2]	728[2]	900[2]	900[2]
Utah		250[2]	200[2]	300[2]	400[2]	400[2]	500[2]	500[2]	500[2]	500[2]	550[2]	850[2]
Nevada[2]		30	20	30	30	30	30	30	30	80	30	30
Arizona		500[2]	300[2]	325	500[2]	500[2]	500[2]	500[2]	700[2]	1,000[2]	1,200[2]	1,500[2]
New Mexico	20[2]	700[2]	600[2]	800[2]	800[2]	1,000[2]	1,200[2]	1,666	1,266	1,400[2]	1,600[2]	1,787[2]
California	43,234	66,880	72,629	74,819	71,819	66,224	85,933	93,845	102,524	121,183	130,417	142,489
Oregon	3,560[2]	5,500	5,500	7,500[2]	8,000[2]	7,500[2]	8,000[2]	8,000[2]	9,000[2]	10,000[2]	10,000[2]	10,500[2]
Washington	1,300[2]	5,000[2]	5,000	4,000[2]	5,000[2]	7,000[2]	10,000[2]	12,207	14,244	15,500[2]	17,500[2]	17,500[2]
United States	6,135,854	7,176,754	4,862,931	5,669,915	6,412,314	6,821,911	7,333,166	7,324,268	6,843,199	7,985,019	7,874,712	8,109,836

[1] Estimated by State authorities. [2] Estimated. [3] Totals of four companies plus estimates for others. [4] Year ended October 31. [5] Based on tag sales.
* Year ended June 30. † Year ended March 31. ‡ Preliminary.

CROP ACREAGE, TONS OF FERTILIZER BOUGHT, AND EXPENDITURES FOR FERTILIZERS 1/ 1929

Division or State	Crop Acreage: Total	Crop Acreage: Per Cent Farm Land	Commercial Fertilizer Bought: Number of Tons	Commercial Fertilizer Bought: Per Cent U.S. Total	Commercial Fertilizer Bought: Per Crop Acre (Lbs.)	Farms Reporting: Number of Farms	Farms Reporting: Per Cent all Farms	Acres in Specified Crops: Cotton	Acres in Specified Crops: Tobacco	Acres in Specified Crops: Potatoes	Acres in Specified Crops: Truck	Expenditures for Fertilizer 2/ (Commercial, limestone, etc.): Dollars	Expenditures: Per Cent U.S. Total	Expenditures: Per Crop Acre ($)	Expenditures: Farms Reporting: Number of Farms	Expenditures: Farms Reporting: Per Cent All Farms
United States	371,948,674	37.69	7,535,022	100.00	40.51	2,239,546	35.61	43,227,488	1,888,365	2,944,082	2,811,715	271,058,673	100.00	.729	2,324,090	37.0
The North	219,372,275	51.53	2,023,125	26.85	18.44	649,656	25.36			2,063,849	1,208,596	79,370,645	29.28	.362	712,123	27.8
The South	113,536,258	33.09	5,324,987	70.67	93.80	1,557,147	48.30			544,308	1,057,449	175,051,949	64.58	1.542	1,564,522	46.5
The West	39,040,141	17.91	186,910	2.48	9.58	32,743	6.51			335,925	545,670	16,635,875	6.14	.426	47,445	9.6
Geographic Divisions																
New England	3,699,524	25.90	345,303	4.58	186.65	68,318	54.69			204,703	78,809	15,413,246	5.69	4.166	66,537	53.9
Middle Atlantic	14,659,820	41.83	798,433	10.60	108.93	206,325	57.70			442,789	368,802	30,202,326	11.14	2.060	224,815	62.3
East North Central	58,239,165	52.52	773,057	10.26	26.55	318,594	32.96			639,801	551,618	29,283,692	10.80	.503	330,709	36.3
West North Central	142,773,346	53.78	106,332	1.41	1.49	56,419	5.07			776,556	188,167	4,471,581	1.66	.031	67,978	6.1
South Atlantic	28,067,225	32.52	3,707,305	49.20	263.96	808,199	76.36			291,075	617,411	119,238,902	43.99	4.245	813,149	76.8
East South Central	25,747,954	35.36	1,185,827	15.74	92.11	529,175	49.82			118,208	142,553	40,093,966	14.75	1.557	530,873	49.5
West South Central	53,701,079	32.46	431,855	5.73	14.47	219,773	15.92			135,031	237,485	15,719,081	5.80	.363	282,100	20.0
Mountain	25,341,934	16.10	10,272	.14	0.81	3,824	1.58			227,320	148,315	630,169	.23	.025	5,817	2.4
Pacific	13,698,207	22.63	176,638	2.34	25.79	28,519	11.05			108,605	397,351	16,005,710	5.90	1.168	41,648	15.9
New England																
Maine	1,310,459	28.24	170,950	2.27	260.90	23,865	61.12			162,396	22,432	7,287,869	2.70	5.561	23,923	61.4
New Hampshire	384,179	19.60	11,500	.15	59.87	6,947	46.61			7,179	4,628	439,516	.16	1.145	6,960	46.7
Vermont	1,080,182	27.72	17,443	.23	32.30	11,928	47.91			13,874	3,510	681,259	.25	.631	11,945	48.0
Massachusetts	484,064	24.14	68,611	.91	283.47	14,232	53.60		8,095	9,719	33,337	3,014,621	1.11	6.227	14,209	53.8
Rhode Island	57,331	20.52	7,909	.11	275.91	1,872	56.35			1,865	3,639	336,196	.12	5.864	1,890	56.9
Connecticut	383,689	25.94	68,690	.91	359.09	9,474	55.10		19,115	9,670	12,863	3,653,387	1.35	5.522	5,900	55.2
Middle Atlantic																
New York	7,128,329	39.69	287,958	3.82	80.79	81,484	50.95		824	212,400	161,552	11,505,537	4.24	1.614	90,500	56.6
New Jersey	796,805	45.32	162,361	2.16	407.53	16,913	66.64			56,963	130,449	6,583,566	2.43	8.262	16,948	66.8
Pennsylvania	6,734,686	43.99	348,113	4.62	103.38	107,988	62.63		40,040	193,426	76,801	12,113,421	4.47	1.799	117,371	68.1
East North Central																
Ohio	10,342,419	48.07	330,444	4.39	63.90	129,486	59.05		49,575	104,490	93,790	11,028,090	4.06	1.066	131,379	59.9
Indiana	10,561,725	53.64	206,144	2.74	39.04	81,679	44.98		19,372	49,642	112,380	7,054,315	2.60	.668	83,006	45.7
Illinois	19,659,484	64.05	53,800	.71	5.47	15,143	7.06	1,613		46,721	116,597	3,593,025	1.33	.183	30,639	14.3
Michigan	7,934,751	46.35	140,083	1.86	35.31	66,550	39.29			223,794	83,242	5,474,181	2.02	.690	72,188	42.6
Wisconsin	9,740,806	44.53	42,586	.56	8.74	25,736	14.16		36,602	213,154	143,809	2,133,377	.79	.215	33,044	18.5
West North Central																
Minnesota	18,700,285	60.49	15,803	.21	1.69	8,968	4.54		1,295	329,598	66,355	714,058	.26	.038	9,402	5.1
Iowa	22,907,877	66.16	21,177	.28	1.88	10,015	4.66			76,883	52,919	1,171,393	.44	.052	15,767	7.3
Missouri	13,981,478	41.44	57,432	.76	8.22	32,564	12.72	358,899	5,035	49,863	37,504	2,030,492	.75	.145	35,762	14.0
North Dakota	22,109,025	57.19	958	.01	.09	342	.04			121,052	662	51,858	.02	.002	572	0.7
South Dakota	18,439,491	50.56	133	.00	.01	103	.01			55,940	2,941	21,452	.01	.001	319	0.4
Nebraska	21,759,123	48.67	732	.01	.07	428	.03			100,906	11,954	53,709	.02	.002	605	0.5
Kansas	25,276,122	53.81	10,097	.14	.80	3,999	2.41	2,446		42,310	16,236	426,622	.16	.017	5,471	3.3
South Atlantic																
Delaware	416,112	46.19	42,736	.57	205.41	7,525	77.52			4,234	33,062	1,300,571	.48	3.126	7,550	77.8
Maryland	1,759,521	40.22	180,363	2.40	205.01	33,676	77.95		32,974	29,958	154,196	5,525,079	2.04	3.140	33,697	78.0
District of Columbia	1,818	59.20	305	.00	335.53	72	69.23			61	641	18,159	.00	9.928	73	70.2
Virginia	4,055,772	24.24	388,937	5.16	191.79	108,162	63.40	88,446	172,134	102,656	75,205	11,780,535	4.35	2.644	110,988	64.8
West Virginia	1,680,684	19.09	45,656	.61	54.33	30,208	36.55		7,181	35,924	10,212	1,161,087	.43	.691	30,380	36.7
North Carolina	5,938,361	32.89	1,107,763	14.70	373.09	233,467	83.47	1,640,398	663,074	61,507	43,901	34,686,630	12.80	5.841	234,486	83.8
South Carolina	4,234,303	40.74	708,470	9.40	334.63	138,976	88.00	1,973,228	112,852	20,323	51,326	22,080,531	8.14	5.215	139,254	88.2
Georgia	8,500,736	38.50	860,602	11.42	202.48	216,633	84.76	3,406,443	90,170	12,952	109,921	27,533,063	10.16	3.239	217,456	85.1
Florida	1,499,918	29.84	372,473	4.94	496.66	39,480	66.95	123,461	10,302	23,460	134,947	15,152,647	5.55	10.102	39,809	67.5
East South Central																
Kentucky	5,481,028	27.51	92,823	1.23	33.87	73,822	29.95	15,898	466,118	49,290	21,971	2,598,592	.96	.474	74,112	30.1
Tennessee	6,251,770	34.73	138,600	1.84	44.34	96,613	39.33	1,045,051	129,373	18,651	45,397	4,110,066	1.52	.657	96,794	39.4
Alabama	7,279,965	41.42	646,707	8.58	177.89	207,677	80.66	3,566,498	547	2,256	36,782	21,889,959	8.05	3.008	208,058	80.8
Mississippi	6,744,191	38.91	307,697	4.09	91.25	151,063	48.31	4,009,534		9,045	38,403	11,555,349	4.26	1.713	152,309	46.4
West South Central																
Arkansas	6,814,084	42.45	127,293	1.69	37.36	73,314	30.25	3,446,465		29,215	40,619	4,606,637	1.70	.676	73,646	30.4
Louisiana	4,137,967	44.57	143,657	1.91	68.44	66,333	41.08	1,945,354		27,466	40,941	5,224,630	1.93	1.246	66,541	41.2
Oklahoma	16,251,194	48.09	7,995	.10	.97	4,171	.02	4,148,228		38,564	24,835	252,511	.09	.016	4,440	2.8
Texas	32,457,944	26.01	153,210	2.03	9.43	75,555	15.33	16,913,568		39,786	131,490	5,631,303	2.08	.174	76,433	15.4
Mountain																
Montana	8,629,514	19.32	248	.003	.06	157	.03			30,673	6,906	29,947	.01	.003	303	0.6
Idaho	3,237,049	34.63	2,091	.030	1.29	1,342	3.27			76,609	6,770	80,694	.03	.025	1,644	4.1
Wyoming	2,104,035	9.94	358	.004	.34	203	12.68			19,952	1,908	25,423	.01	.012	281	1.8
Colorado	7,608,450	26.35	1,175	.020	.31	749	1.25			59,692	61,171	165,188	.06	.022	1,464	2.5
New Mexico	1,592,106	5.17	2,339	.030	2.94	720	2.29	136,700		4,097	8,458	96,520	.04	.062	844	2.7
Arizona	513,651	4.98	3,704	.050	14.42	518	3.61	211,176		1,507	39,171	176,021	.06	.343	524	3.7
Utah	1,207,440	21.51	264	.003	.44	106	.04			10,795	22,480	48,846	.02	.040	646	2.4
Nevada	449,660	11.02	93	.000	.41	35	1.02			3,692	1,555	5,330	.00	.012	41	1.2
Pacific																
Washington	3,536,973	25.35	21,561	.29	11.24	8,370	11.80			43,308	23,556	1,194,379	.44	.311	9,610	13.6
Oregon	3,017,775	15.24	12,467	.16	8.26	4,499	5.16			33,233	18,264	669,510	.25	.222	8,163	14.5
California	9,961,228	32.39	142,610	1.89	28.92	16,050	11.83	310,958		31,658	355,231	14,141,521	5.21	1.434	23,055	17.6
Other States									1,281							

1. All data from Fifteenth Census of the United States, 1930; Agriculture, Vol. II, Part 2, United States Summary, Bureau of the Census, 1932 as follows:
   a. Crop acreage, 1929-Sum of data published for "Crop Land Harvested" and "Crop Failure", table 3, page 24.
   b. Commercial Fertilizer Bought-Tons and Number of Farms Reporting, table 22, page 53.
   c. Acres in Specified Crops: Cotton Table 46, page 91; Tobacco, Table 47, page 91; Potatoes, Table 44, page 89; Truck Crops-Total Acreage Vegetables Harvested for Sale, table 61, page 95.
   d. Expenditures for Commercial Fertilizers-Value and number of farms reporting, table 22, page 52.

2. Includes expenditures for commercial fertilizers, manure, lime, marl, and ground limestone.

9761

EXHIBIT 25

APPENDIX II

EXHIBIT

TONNAGE OF PLANT-FOOD CONSUMED IN THE YEAR ENDED JUNE 30, 1934

State	In mixed fertilizers			In materials sold to consumers			In all fertilizers			Total plant food
	Nitrogen	Available P_2O_5	Potash	Nitrogen	Available P_2O_5	Potash	Nitrogen	Available P_2O_5	Potash	
New England	12,224	21,942	22,204	3,700	5,418	3,841	15,924	27,360	26,045	69,330
Maine	7,017	12,833	14,772	1,008	1,283	2,177	8,025	14,116	16,949	39,090
N. H.	517	961	820	199	345	64	716	1,306	885	2,907
Vt.	446	970	746	128	442	20	574	1,412	766	2,752
Mass.	2,147	3,733	3,030	1,196	1,598	576	3,343	5,331	3,606	12,280
R. I.	448	825	684	137	221	39	585	1,046	723	2,354
Conn.	1,649	2,620	2,152	1,032	1,529	965	2,681	4,149	3,117	9,947
Middle Atlantic	21,632	59,766	39,820	6,030	24,146	5,107	27,662	83,912	44,927	156,501
N. Y.	6,387	16,204	10,355	2,061	6,054	487	8,448	22,258	10,842	41,548
N. J.	4,760	10,025	8,147	1,107	1,285	586	5,867	11,310	8,733	25,910
Pa.	5,385	19,266	11,779	1,069	9,460	1,018	6,454	28,726	12,797	47,977
Del.	559	2,252	1,557	120	609	213	679	2,861	1,770	5,310
Md.	3,785	9,207	7,828	1,155	3,170	1,160	4,940	12,377	8,988	26,305
W. Va.	756	2,812	154	518	3,568	1,643	1,274	6,380	1,797	9,451
Southern	88,692	235,497	116,109	78,178	60,449	23,406	166,870	295,946	139,515	602,331
Va.	8,762	19,795	9,734	2,193	11,300	446	10,955	31,095	10,180	52,230
N. C.	21,789	57,244	25,823	15,971	11,047	4,977	37,760	68,291	30,800	136,851
S. C.	12,903	38,703	16,619	13,781	6,856	5,179	26,684	45,559	21,798	94,041
Ga.	12,002	41,979	18,066	11,595	4,278	2,980	23,597	46,257	21,046	90,900
Fla.	14,483	25,294	21,732	7,622	2,995	4,199	22,105	28,289	25,931	76,325
Ala.	8,499	23,200	11,220	11,719	7,872	3,797	20,218	31,072	15,017	66,307
Miss.	4,137	9,007	4,326	7,714	3,529	714	11,851	12,536	5,040	29,427
Tenn.	1,189	5,820	2,546	671	4,271	261	1,860	10,091	2,807	14,758
Mo.	452	2,623	617	271	3,972	87	723	6,595	704	8,022
Ark.	1,316	3,496	1,689	665	553	325	1,981	4,049	2,014	8,044
La.	1,459	4,438	1,807	5,316	1,892	238	6,775	6,330	2,045	15,150
Texas	1,574	3,590	1,734	648	1,800	196	2,222	5,390	1,930	9,542
Okla.	127	308	196	12	84	7	139	392	203	734
Mid-west	8,970	50,365	27,140	2,718	26,459	2,242	11,688	76,824	29,382	117,894
Ohio	3,218	19,012	8,018	829	13,025	572	4,047	32,037	8,590	44,674
Ind.	2,044	14,169	8,201	170	3,377	915	2,214	17,546	9,116	28,876
Ill.	298	1,421	956	457	1,007	158	755	2,428	1,114	4,297
Ky.	1,222	3,579	1,759	173	4,828	24	1,395	8,407	1,733	11,535
Mich.	1,625	9,098	5,117	629	2,478	282	2,254	11,576	5,399	19,229
Wis.	359	1,880	1,498	370	528	198	729	2,408	1,696	4,833
Minn.	131	721	1,176	45	534	71	176	1,255	1,247	2,678
Iowa	46	353	383	12	361	20	58	714	403	1,175
Kans.	24	122	27	20	264	2	44	386	29	459
Nebr.	1	3	2	12	.....	.....	13	3	2	18
S. Dak.	1	1	1	1	.....	.....	2	1	1	4
N. Dak.	1	6	2	.....	57	.....	1	63	2	66
Western	4,952	6,290	3,995	14,595	7,806	1,371	19,547	14,096	5,366	39,009
Mont.	.....	.....	.....	4	78	.....	4	78	.....	82
Wyo.	.....	.....	.....	10	113	.....	10	113	.....	123
Idaho	1	3	4	29	145	4	30	148	8	186
Colo.	17	48	15	70	29	2	87	77	17	181
Utah	8	20	8	13	94	2	21	114	10	145
Nevada	18	54	18	6	.....	.....	24	54	18	96
Ariz.	1	1	1	55	99	.....	56	100	1	157
N. Mex.	.....	.....	.....	8	204	.....	8	204	.....	212
Cal.	4,484	5,258	3,179	13,118	5,648	837	17,602	10,906	4,016	32,524
Oregon	146	343	290	426	683	275	572	1,026	565	2,163
Wash.	277	563	480	856	713	251	1,133	1,276	731	3,140
Territories	8,618	5,546	9,805	5,685	257	59	14,303	5,803	9,864	29,970
Puerto Rico	8,618	5,546	9,805	5,685	257	59	14,303	5,803	9,864	29,970
United States	145,088	379,406	219,073	110,906	124,535	36,026	255,994	503,941	255,099	1,015,035

Exhibit 27

General Summary of Fertilizer Consumption in the Year Ended June 30, 1934 in Relation to Grades of Mixed Goods Reported

State	Estimated Total Fertilizer Consumption	Reported in N. F. A. Survey	Part reported of total	Mixed Fertilizers reported	Grades reported	Leading grade N-P_2O_5-K_2O	Tonnage in—			
							Leading grade	1st 5 grades	1st 10 grades	1st 25 grades
	tons	*tons*	*per cent*	*tons*	*number*		*per cent*	*per cent*	*per cent*	*per cent*
New England	299,462	280,423	93.66	220,286	121	5-8-7	17.44	60.89	76.38	77.89
Maine	150,000	133,070	88.71	118,468	56	4-8-10	25.53	61.13	83.16	99.05
N. H.	14,210	14,210	100.00	10,249	47	5-8-7	31.36	66.86	82.02	96.93
Vt.	13,000	12,773	98.25	9,468	37	4-8-4	13.63	57.97	81.15	99.22
Mass.	60,699	60,504	99.68	42,276	83	5-8-7	35.17	73.59	83.59	93.76
R. I.	11,553	11,553	100.00	9,411	51	5-8-7	27.94	75.62	87.36	98.36
Conn.	50,000	48,373	96.75	30,414	76	5-8-7	30.38	64.58	75.99	92.79
Middle Atlantic	818,288	756,559	92.46	581,380	272	4-8-7	13.85	44.69	66.00	92.54
N. Y.	210,000	191,450	91.17	147,615	97	4-8-7	18.73	56.37	81.26	97.17
N. J.	130,000	117,855	90.66	102,199	133	5-8-7	15.76	57.95	76.36	92.47
Pa.	260,000	243,341	93.59	182,216	150	4-8-7	15 65	61.76	76 83	91.91
Del.	30,000	27,096	90.32	22,189	65	0-12-5	19 03	60.69	82.53	95.58
Md.	140,000	128,529	91 80	102,226	134	2-8-5	22 39	58 87	76.41	92.55
W. Va.	48,288	48,288	100 00	24,935	69	4-12-10	16.85	62.13	82.52	96.92
Southern	3,587,590	2,620,866	73 05	1,968,338	867	3-8-3*	16 10	46.49	61.49	79.64
Va.	324,010	229,945	70.97	163,611	224	6-6-5	28.48	62.55	75.38	92.82
N. C.	872,072	672,366	77.10	519,858	250	3-8-3	57.30	82.71	91.91	97.83
S. C.	590,636	358,277	60 66	267,408	144	8-3-3**	48 00	86 23	91.95	97.72
Ga.	562,651	436,301	77.54	354,310	108	9-3-3**	24.15	74 05	93.13	99 03
Fla.	399,644	231,436	57.91	184,751	425	5-7-5 §	9 39	34 11	48 99	69.03
Ala.	366,916	294,477	80 26	207,189	56	3-8-5	39 41	87.14	95.27	99.26
Miss.	169,620	157,807	93 04	104,735	21	4-8-4	85.36	98.48	99.51	.....
Tenn.	89,269	84,452	94 60	56,060	63	0-10-4	31.34	71.59	88.27	98.31
Mo.	41,011	25,346	61 80	14,649	64	2-12-2	66 44	81 06	90.55	98.46
Ark.	41,775	28,905	69.19	23,414	33	4-8-6	38.26	85.64	97.39	99.94
La.	78,712	60,862	77 32	40,601	32	4-8-4	25 57	81 48	95 52	99.67
Texas	47,536	38,370	80 72	29,853	27	4-8-4	21 39	77.58	96 26	99.96
Okla.	3,738	2,322	62 12	1,899	15	4-8-6	61 87	92.15	99 05	.....
Mid-west	564,447	464,624	82 31	344,412	215	2-12-6	32 63	60 48	67.89	82 27
Ohio	224,403	183,430	81.74	126,089	92	2-12-6	32.00	72.95	83 35	95 01
Ind.	131,881	99,616	75 53	85,064	120	2-12-6	44 09	70.23	80 22	91.16
Ill.	19,347	14,959	77 32	9,964	73	4-8-6	13.65	48.74	68.52	88 87
Ky.	61,818	50,255	81 30	29,747	57	3-8-6	26 85	69 80	85.35	98.67
Mich.	90,000	88,316	98 13	72,337	81	2-12-6	40 55	72.08	82.18	95 60
Wis.	19,844	14,921	75 19	12,362	73	2-12-6	24 17	67.98	85.59	97.05
Minn.	9,262	6,973	75 29	5,426	46	0-9-27	50 18	72 08	87.71	98 51
Iowa	5,000	3,694	73 88	2,163	36	2-12-6	27 41	68.55	83.66	98 87
Kan.	2,500	2,068	82 72	980	22	2-12-2	54 60	84.20	94.10	.....
Neb.	84	84	100 00	28	2	4-10-6	82.10	.....	.....	.....
S. Dak.	10	10	100 00	9	1	2-14-4	100 00	.....	.....	.....
N. Dak.	298	298	100 00	43	1	2-14-4	100 00	.....	.....	.....
Western	188,130	118,353	62 75	26,719	174	14-10-2	17 79	48 40	63.56	78.67
Mont.	200	21	10 50	.....	.....	.....	.....	.....	.....	.....
Wyo.	300	1	0 33	.....	.....	.....	.....	.....	.....	.....
Idaho	500	116	23 20	20	4	3-10-10	60 00	.....	.....	.....
Colo.	800	400	50 00	189	6	4-12-2	52 90	98.90	.....	.....
Utah	500	1	0.20	.....	.....	.....	.....	.....	.....	.....
Nevada	500	479	95.80	447	.....	.....	.....	.....	.....	.....
Ariz.	800	596	74 50	4	2	6-9-6	75.00	.....	.....	.....
N. Mex.	1,000	793	79 30	.....	.....	.....	.....	.....	.....	.....
Cal.	159,530	93,922	58.87	17,501	144	14-10-2	27.31	57.94	68.74	84.38
Oregon	9,000	7,543	83.81	2,883	15	3-10-10	34.48	89.68	97 97	.....
Wash.	15,000	14,181	94.54	5,672	23	3-10-7	25.60	75.18	88 56	.....
Territories	120,809	109,404	90.56	83,296	103	10-6-16 §	16.34	54.67	78 35	95.35
Puerto Rico	120,809	109,404	90.56	83,296	103	10-6-16 §	16.34	54.67	78.35	95.35
United States†	5,578,726	4,349,989	77.97	3,224,431	1,291*	3-8-3	9.83*	29.43*	43.58*	65.54*

* Grades in which one figure represents ammonia are here treated as different grades from the corresponding ones on a nitrogen basis. For the percentages when both such similar grades are combined see Table 2.

** P_2O_5-NH_3-K_2O.

§ NH_3-P_2O_5-K_2O.

† Including Puerto Rico.

APPENDIX II.

EXHIBIT 28.

MARYLAND
OFFICIAL GRADES ADOPTED UNDER CODE a/
WITH 1934 TONNAGE OF EACH

	Official Grades	1934 b/ Short Tons	Consumption Per Cent Actual	Cumulative
1.	4-8-5	12,279	12.29	12.29
2.	6-6-5	11,397	11.95	24.24
3.	0-12-5	6,989	6.99	31.23
4.	4-8-7	5,323	5.33	36.56
5.	2-8-10	4,303	4.31	40.87
6.	2-12-4	3,742	3.75	44.62
7.	2-9-5	3,579	3.59	48.21
8.	3-8-10	2,921	2.92	51.13
9.	4-8-10	2,106	2.10	53.23
10.	2-12-6	1,698	1.70	54.93
11.	3-12-6	1,560	1.56	56.49
12.	4-8-12	1,354	1.36	57.85
13.	1-10-5	1,242	1.24	59.09
14.	2-10-4	779	0.78	59.87
15.	5-8-10	639	0.64	60.51
16.	3-8-8	613	0.61	61.12
17.	5-10-5	612	0.61	61.73
18.	4-12-4	364	0.36	62.09
19.	8-5-2	260	0.26	62.35
20.	6-6-8	175	0.18	62.53
21.	0-10-10	127	0.13	62.66
	Total 21 grades	58,062	62.66	

a/ The Fertilizer Review, November - December 1934, page 10.
b/ Fertilizer and Plant Food Consumption, Proceeding 11th Annual Convention, National Fertilizer Association, 1935, Table 3, page 161-162.

Total 1934 tonnage mixed fertilizer 134 different grades - 99,935. The approved list containing 1 additional grade 5-8-12 for which 1934 tonnage data are not available. The official grade list also provides as follows:

1. The sale of mixed fertilizer containing a total of 24 or more units of plant food in multiple of the above ratios is permitted.

2. The above lists of grades do not include top-dressers, which if offered for sale, shall contain not less than 9 per cent of nitrogen nor less than 16 per cent of total plant food.

APPENDIX II

EXHIBIT 29

Executive Order

Defining Effect of Certain Provisions in Codes of Fair Competition Upon Cooperative Organizations

In a number of codes of fair competition which have heretofore been approved or submitted for approval pursuant to title I of the National Industrial Recovery Act, approved June 16, 1933, there have been included provisions designed to limit or prohibit the payment or allowance of rebates, refunds, or unearned discounts, whether in the form of money or in any other form, and the extension to certain purchasers of services or privileges not extended to all purchasers under similar terms and conditions. Question has arisen as to whether provisions of such tenor do not preclude the payment of patronage dividends to members by bona fide and legitimate cooperative organizations, including farmers' cooperative associations, corporations, or societies hereinafter designated farmers' cooperatives.

Pursuant to the authority vested in me by title I of the National Industrial Recovery Act, upon due consideration of the facts, and upon the report and recommendation of the Administrator,

I, Franklin D. Roosevelt, President of the United States, do hereby order that no provision in any code of fair competition, agreement, or license which has heretofore been or may hereafter be approved, prescribed, or issued pursuant to title I of the National Industrial Recovery Act, shall be so construed or applied as to prohibit the payment of patronage dividends in accordance with law to any member by any bona fide and legitimate cooperative organization, including any farmers' cooperative, duly organized under the laws of any State, Territory, or the District of Columbia or of the United States, if such patronage dividends are paid out of actual earnings of such cooperative organization and are not paid at the time when such member makes a purchase from such cooperative organization.

Franklin D. Roosevelt

The White House
October 23, 1933

Approval recommended:
Hugh S. Johnson,
Administrator.

APPENDIX II

EXHIBIT 30

Executive Order

Supplement to and Amplification of Executive Order No. 6355 of October 23, 1933.

WHEREAS questions have arisen concerning the scope and meaning of Executive Order No. 6355, of October 23, 1933, defining the effect of certain provisions in codes of fair competition upon cooperative organizations:

NOW, THEREFORE, by virtue of and pursuant to the authority vested in me under Title I of the National Industrial Recovery Act approved June 16, 1933 (48 Stat. 195), it is ordered that said Executive Order No. 6355 be, and it is hereby, supplemented and amplified as follows:

1. No provision in any code of fair competition, agreement or license which has heretofore been or may hereafter be approved, prescribed, or issued pursuant to Title I of the National Industrial Recovery Act, shall be construed or applied so as to make it a violation of any code of fair competition to sell to or through any bona fide and legitimate cooperative organization, including any farmers' cooperative, duly organized under the laws of any State, Territory, or the District of Columbia, of of the United States, or to sell through any intervening agency to such cooperative organization.

2. No such code of fair competition shall be construed or interpreted so as to prevent any such cooperative organization from being entitled to receive, and/or distribute to its members as patronage dividends or otherwise the proceeds or benefits directly or indirectly derived from any discount, commission, rebate, or dividend (a) ordinarily paid or allowed to other purchasers for purchases in wholesale or middleman quantities or (b) paid or allowed pursuant to the requirements or provisions of any code of fair competition to other purchasers for purchases in wholesale or middleman quantities.

3. The Administrator for Industrial Recovery is hereby authorized to determine, after such hearings and proceedings as he may deem necessary, whether, in any doubtful case, an organization is or is not a bona fide and legitimate organization entitled to the benefits and protection of this order.

Franklin D. Roosevelt

The White House,
February 17, 1934

(no. 6606-A)

APPENDIX II

EXHIBIT 31

Administrative Order No. X-35

Definition of Farmers' and Consumers' Cooperatives

In any Code of Fair Competition operating under the terms of the National Industrial Recovery Act, cooperative organizations, as determined by the Administrator of the Act, to be entitled to the benefits and protection of Executive Order numbered 6355 of October 23, 1933, as supplemented and amplified by Executive Order number 6606-A of February 17, 1934, as a bona fide and legitimate cooperative organization must comply with the following conditions, limitations and restrictions:

1. Be duly organized under the laws of any state, territory, or the District of Columbia.

2. Allow to each member owning one fully paid share or membership one vote and only one in the determination of matters affecting the management of the organization, except as otherwise provided by the law under which such organization is incorporated; provided that a central or regional cooperative association, the membership of which is composed of cooperative associations, may provide in its by-laws for voting based upon the volume of business done by the members with the central or regional cooperative, or on the number of members in the member association.

3. Operate on a cooperative basis for the mutual benefit of its members, and all income, after providing for reasonable and adequate surplus and reserves, as determined by its Board of Directors, and payment of dividends on stock or membership capital of not to exceed eight (8) per centum per annum, cumulative, shall be distributed to members or share holders on the basis of patronage at stated periods but not more frequently than semi-annually.

4. Transact business with and for on on behalf of, non-members to an amount not greater in value, during any fiscal year, than the business transacted with and for and on behalf of, members during the same period.

5. Permit all members and stockholders to have access to the records for the purpose of determining the salary and compensation paid officers and employees, and that no salaries or commissions are paid except for services actually rendered.

6. Distribute patronage dividends equally to all members, and/or stockholders, who have complied with membership requirements, in proportion to their purchases, and/or sales; may permit accumulation of patronage dividends on non-member business until it equals the value of a share of stock when same shall be issued; does not distribute such dividend in the form of a refund at the time of purchase; and does not evidence any such lividends by any

PROPOSED TRADE PRACTICE RULES
Exhibit 32
Part 1

For Release in AFTERNOON NEWSPAPERS of Friday, November 8, 1935.

FEDERAL TRADE COMMISSION
Washington

Trade practice rules proposed for the fertilizer industry and submitted to the Federal Trade Commission for its consideration and approval under its trade practice conference procedure, were made available by that commission today. In making available the suggested rules, the Commission issued the following statement:

NOTICE OF OPPORTUNITY TO BE HEARD

Opportunity is extended by the Commission to any and all persons affected by or having an interest in the proposed trade practice rules to present to the Commission their views upon the same, including suggestions or objections, if any. For this purpose they may, upon application to the Commission, obtain copies of the proposed rules. Communication of such views should be made to the Commission not later than November 25, next. Opportunity for oral hearing will be afforded at 10 a. m., Monday, November 25, 1935, at Room 2724, Federal Trade Commission Building, Washington, D. C., to such persons as may desire to appear, and who have made prior written or telegraphic request to be heard orally. All briefs or other communications received concerning the proposed rules will become part of the public record subject to inspection by interested parties. After giving due consideration to such suggestions or objections as may be received concerning the rules proposed by the industry, the Commission will proceed to their final consideration.

Application to the Commission for consideration and approval of the trade practice conference rules for this industry was made by the National Fertilizer Association, Inc., reported as comprising about 95 per cent of the entire fertilizer tonnage in the United States. The industry comprises all of the following groups: Producers and importers of (1) sulphur, pyrites and by-product sulphur fumes; (2) phosphate rock; (3) superphosphate; (4) other compounds in which phosphorus is available as plant food; (5) inorganic nitrogen; (6) synthetic organic nitrogen; (7) various animal and vegetable nitrogen by-products; (8) potash, and (9) mixed fertilizers.

According to information furnished the Commission, there are in this country approximately 900 individual operators, with a total of about 950 plants, engaged in manufacturing fertilizer, including superphosphate. Located in more than forty states, these plants are

said to represent an investment of $300,000,000. There are also investments in nitrogen plants and in the phosphate rock, sulphur, pyrites and potash industries, reported as amounting to at least $200,000,000 additional, making a total investment in the industry of about $500,000,000.

According to information furnished the Commission, the total consumption of fertilizer in the United States in 1934 was more than five and one-half million tons with an estimated retail sales value of $158,500,000. The industry is said to employ approximately 30,000 wage-earners.

PROPOSED TRADE PRACTICE RULES SUBMITTED
BY REPRESENTATIVES OF THE FERTILIZER INDUSTRY

(These rules have not been approved or passed upon by the Federal Trade Commission. They are a draft of proposed rules presented to the Federal Trade Commission for its consideration.)

PROPOSED TRADE PRACTICE CONFERENCE RULES
FOR THE FERTILIZER INDUSTRY

Sales Below Cost

It is an unfair method of competition for any producer, either directly or through an employee, agent, or representative, to sell, offer for sale, or solicit the purchase of, or to consign mixed fertilizer, superphosphate, or any other fertilizer material below his cost, to be determined by a sound uniform cost accounting method to be approved by the Board of Directors of this Association, where the effect may be substantially to lessen competition or tend to create a monopoly or unreasonably to restrain trade.

Loss Leader Transactions

The selling, offering to sell, or consigning of any product of the industry at a loss to induce the purchase of other products of the industry, with the tendency or capacity to mislead or deceive purchasers or prospective purchasers and which unfairly diverts trade or otherwise injures competitors, is an unfair method of competition.

Misleading Price Information

The making, publishing, or circulating or permitting to be made, published, or circulated, of false, fictitious, or misleading quotations, statements, or price lists as to prices, terms or conditions of sale, having a tendency or capacity to mislead or deceive purchasers or prospective purchasers, is an unfair method of competition.

Rebates

The granting of rebates, irrespective of the form they may assume or the method by which they are paid or allowed, where the effect may be substantially to lessen competition or tend to create a monopoly or unreasonably to restrain trade or to result in unlawful price discrimination, is an unfair method of competition. The following, among others, are examples of practices which violate this principle and therefore are unfair methods of competition:

a. Withholding from or inserting in an invoice statements which make the invoice a false record, wholly or in part, of the transaction represented on the face thereof.

b. Providing railroad, truck, or any other mode of transporting or delivering mixed fertilizer, superphosphate, or any other fertilizer material without adequately charging for such transportation.

c. Reimbursing a dealer, agent, purchaser, or consignee for the cost of transportation at any amount other than that set forth in the producer's contract.

d. Selling, offering to sell, or soliciting the purchase of, or consigning mixed fertilizers, chemicals, superphosphate, or any other fertilizer material with special commissions or at reduced prices, as an inducement to a purchaser or prospective purchaser or consignee to purchase other mixed fertilizer, superphosphate, or any other fertilizer material.

e. Failure to enforce in good faith the terms of any contract previously made for the sale of mixed fertilizer, superphosphate, or any other fertilizer material.

f. Selling on terms that require the payment of sight draft on presentation of bill of lading. (S.D.B.L.) and then waiving the obligation to pay cash before documents or goods are delivered, thus deferring the payment of the cash to some future date.

g. Selling and delivering goods on time, consignment, or open bill of lading terms at S.D.B.L. price, or waiving earned interest.

h. Furnishing containers other than the producer's standard containers, preparing a special formula for an individual purchaser, consignee, or agent,

or using special ingredients in a standard formula, without charging for the additional cost of such containers, or of such formulas or special ingredients and the mixing thereof.

i. Making a special allowance to a purchaser, consignee, or agent under the guise of advertising expense, or giving any other form of gratuity.

j. Employing a purchaser, or prospective purchaser, or consignee, or prospective consignee, or his agent or anyone employed by or connected with a purchaser, or prospective purchaser, or consignee, or prospective consignee, with the purpose and design, and effect of influencing the business of such purchaser, consignee, prospective purchaser, or prospective consignee.

k. Treating as delinquent any balance due by a solvent customer with no intention of requiring ultimate payment.

l. Enabling a purchaser to obtain mixed fertilizer, superphosphate, or any other fertilizer material apparently on cash terms, but in fact on credit extended to him by or through the producer, as, for example:

1. A transaction covered by a sight draft and bill of lading under which a purchaser or consignee is made to appear as honoring documents upon presentation by payment with his own funds, when in fact the cash involved was obtained in whole or in part upon a negotiable instrument bearing the endorsement of the producer; or

2. A transaction by which a producer, although he does not actually endorse the obligation, renders himself legally or morally responsible for its payment if the purchaser or consignee shall fail to meet his obligation at maturity.

3. Refunding to a purchaser or consignee, either directly or indirectly, any part of the purchase price on account of goods accepted and/or settled for by the purchaser or consignee under the terms of the contract. This practice is commonly referred to as "retroactive settlement."

Defamation of Competitor

The defamation of a competitor by falsely imputing to such competitor dishonorable conduct, inability to perform contracts, questionable credit standing, or by other false representation, or the false disparagement of the grade or quality of his goods, with the tendency or capacity to mislead or deceive purchasers or prospective purchasers, is an unfair method of competition.

Unearned Allowances and Special Services

The payment or allowance of an unearned commission or discount, or of a claim known to be false or unjustified, whether in the form of money or otherwise, or extending to any purchaser any special service or privilege not extended to all purchasers under like terms and conditions, is an unfair method of competition.

Inducing Sales by Selling, Buying, or Exchanging Other Commodities

The buying or the taking in exchange of farm crops, produce, or any other commodity of commerce at prices in excess of the current market price, or the selling, offering for sale, soliciting the purchase of, or the exchanging of farm crops, produce, or any other commodity of commerce at prices below the current market price as an inducement to the purchase of mixed fertilizer, superphosphate, or any other fertilizer material where the effect may be substantially to lessen competition or tend to create a monopoly or unreasonably to restrain trade, is an unfair method of competition.

Warehouses

The operation or use by a producer of any warehouse owned or controlled by such producer, or of any warehouse or warehouse space owned, controlled, rented, or leased by him or his agent, or employee, in such way or under such circumstances as to result in the granting of any rebate or special allowance in connection with the sale or distribution of any mixed fertilizer, superphosphate, or any other fertilizer material is an unfair method of competition.

Inducing Breach of Contract.

Knowingly inducing or attempting to induce, by any means, the breach of any contract for the sale or consignment of mixed fertilizer, superphosphate, or any other fertilizer material entered into by another producer is an unfair method of competition.

Misbranding

The false marking or branding of any product of the industry sold, consigned, or offered for sale, which has the tendency or capacity to mislead or deceive customers or prospective customers as to the grade, quality, quantity, substance, character, nature,

origin, size, finish, or preparation is an unfair method of competition.

False and Misleading Advertising

The making or causing or permitting to be made or published of any false, untrue, deceptive, or misleading statement by way of advertisement or otherwise concerning the grade, quality, quantity, substance, character, nature, origin, size, or preparation of any product of the industry, having the tendency or capacity to mislead or deceive purchasers or prospective purchasers, is an unfair method of competition.

Commercial Bribery

The offering or giving of money or anything of substantial value to an employee, agent, or representative of a purchaser or prospective purchaser, without the knowledge or consent of the purchaser or prospective purchaser, for the purpose or with the intent or effect of influencing the business of the purchasers or prospective purchaser, is an unfair method of competition.

Price Discriminations

Discriminating directly or indirectly in price, terms, or conditions of sale between different purchasers is an unfair trade practice: Provided, that a producer may discriminate in price, terms, or conditions of sale between purchasers -

1. On account of differences in the grade, quality, or quantity of the commodity sold, or

2. Because of, and only to the extent of an actual difference in the cost of selling or transportation, or

3. Because such discriminatory prices, terms, or conditions of sale are made in good faith to meet existing competition.

Reduction in Number of Grades

A list of grades suitable to meet the agricultural needs of each State in the District, or of the District as the case may be, may from time to time be established by the producers in the District or State, acting through a committee, in cooperation, whenever possible, with agronomists and other Federal and State agricultural officials. After such grades have been established for any such State or District, the sale therein of mixed fertilizer not conforming to the grades so established is prohibited as an unfair trade practice: Provided, that the sale of special formulas or special ingredients in standard formulas may be made to fill bona fide orders

received from consumers who order, on their own specifications, such special formulas or special ingredients in standard formulas if adequate charge is made for such special formulas or special ingredients and the mixing thereof.

Information and Statistics

For the protection of buyers and sellers, competition should express itself openly and fairly and not in secret or discriminatory form. To that end, members of the fertilizer industry may publish information and statistics relating to sales and shipments, as indicated in the following:

1. Price Reporting

Section 1

A. Within seven days after a producer becomes a member of the District _____ Fertilizer Producers Fair Practice Association he shall mail by first-class mail, with postage fully paid, to the Secretary of the Association, for filing, and, at the same time, to each other member of the Association from whom he has not on file an unrevoked waiver of receipt thereof, a price list, for the District or for each subdistrict thereof in which he intends to do or solicit business.

B. Subsequently, the member, may from time to time and at any time, mail in like manner to the Secretary of the Association, for filing, and, at the same time, to each other member of the Association from whom he has not on file an unrevoked waiver of receipt thereof, (1) a new price list superseding his current price list, and/or (2) a dated supplement to his current price list, identified therewith, adding and/or removing one or more grades or materials, but in any event not more than a total of three supplements to any one price list shall be mailed or filed.

C. For the purposes of these By-Laws, the price lists and/or supplements received from a member and filed by the Secretary of the Association shall be deemed to be such member's true and correct price lists and/or supplements, except that where an identical price list or supplement mailed by a member to all the other members of the Association is different from that received and filed by the Secretary, such identical price list or supplement shall be such member's true and correct price list or supplement.

D. Each price list shall be dated, shall show the District or the subdistrict to which it applies, and shall set forth in clear, concise, and definite language all the prices, terms, and conditions which the member intends to use in connection with the sale or offer for sale, or in soliciting purchases of, all grades or kinds of mixed fertilizer, superphosphate, and/or other fertilizer materials which he intends to sell, including the following:

1. Name of member and address for the District or subdistrict.

2. Specific geographical area or areas to which listed prices apply in event they do not apply to the whole of the District or subdistrict.

3. Class or classes of purchasers to which the price list applies: consumers, retail dealers, private brand companies, wholesale or other cooperative associations, wholesale dealers.

4. Point or points from which deliveries are to be made.

5. Period of delivery contemplated by the price list.

6. Method of quoting prices, e. g.,

a. Consumer-delivered-to-the-farm.

b. F. O. B. factory

c. Delivered railroad station, or

d. Any other method.

7. Price of each grade or kind of mixed fertilizer, superphosphate, and/or other fertilizer material, according to class or classes of purchasers, including a complete method whereby the price of any special mixture to be sold or offered for sale may be determined.

8. Quantities to which listed prices apply.

9. Description of containers as to type, capacity, and material, and differentials, if any, for shipment in other specified containers, or in bulk.

10. Cash and/or credit terms, including settlement date or dates, rate of interest and date of maturity of notes, if any.

11. Terms of conditions, if any, applicable to repurchase of bags or other containers, or allowance for bags or other containers.

12. Agents' compensation, if any, in whatever form.

13. As to any State where a sales tax is collectible whether such tax is included in or excluded from the listed prices.

14. All trucking compensations or allowances, if any, to agents or purchasers.

15. Wharfage or other port charges, if any.

16. Warehousing allowances or warehousing compensations, if any, applicable in connection with sales.

17. The geographical areas, by town or county, or other appropriate description, in which the member intendes to participate in the advancing of cash or any farm supplies other than mixed fertilizer, superphosphate, or other fertilizer materials, either direct to purchasers or through any agency, if such member engages in such practice.

E. A member shall, within three days after receipt of request from the Fair Trade Practice Committee of the Association, issue and mail to the Secretary and to each other member of the Association, as prescribed in this Section, a written clarification of any paragraph, sentence, clause, or phrase which appears in his current price

list or in any supplement thereof which such Committee deems to be ambiguous or incomplete.

E. At the time of mailing his first price list, each member of the Association shall also mail by first-class mail, with postage fully paid, to the Secretary of the Association a statement of the undelivered tonnage of each grade or kind of mixed fertilizer, superphosphate, and/or other fertilizer material which he has contracted to sell at prices or on terms or conditions at variance with those of such price list, with the name of the purchaser and the prices, terms, and conditions at variance with those of such price list.

Section 2

Whenever a member shall have made an agreement or offer to change the agents' compensation or other terms or conditions of sale, and/or shall have made any sale, contract of sale, or solicitation of purchase, at a price or on terms or conditions different from those contained in his current price list, he shall, within 24 hours after making such agreement or offer and/or such sale, contract of sale, or solicitation of purchase, mail by first-class mail, with postage fully paid, to the Secretary of the Association, for filing, a report, on a form approved by the Directors of the Association, showing the terms of such agreement or offer, and/or whether such sale, contract of sale, or solicitation of purchase was a cash or a credit transaction, the class of purchaser, and the point of destination as specified by the agent or purchaser (not the purchaser's name), together with the tonnage of each grade or kind of mixed fertilizer, superphosphate, and/or other fertilizer material so sold and the prices, terms, or conditions used which were different from those set forth in his current price list. The Secretary shall prepare a daily summary, on a form approved by the Directors of this Association, of all such reports received by him up to noon of the current business day, and shall mail by first-class mail, with postage fully paid, a copy of such summary to each other member of the Association.

Section 3

Each member, by joining the Associaiton, declares that he understands and has personal knowledge of the fact that he is not in any manner or to any extent bound to adhere to the prices, terms, or conditions set forth in any price list, supplement or report mailed by him in accordance with any of the provisions of this Article, and that he may sell, offer for sale, or solicit the purchase of his goods at any prices, or on any terms or conditions acceptable to him: Provided, that he shall not by the use of such prices, terms, or conditions violate the pertinent provisions of these By-Laws and particularly Article XV relating to fair practice rules.

II. Reports of Shipments

Section 1

On _____ each
(time to be determined by the Board of Directors)

Exhibit 32
Part 2

COMPARISON OF THE PROPOSED TRADE PRACTICE CONFERENCE RULES WITH THE CODE OF FAIR COMPETITION FOR THE FERTILIZER INDUSTRY

(For purposes of brevity the provisions contained in the Code of Fair Competition for the Fertilizer Industry, approved October 31, 1933, will be termed "old" or "old provisions" and the provisions contained in the Proposed Trade Practice Conference Rules, which are to be submitted by the National Fertilizer Association to the Federal Trade Commission, on behalf of the Industry, will be termed "new" or "new provisions".)

PROPOSED TRADE PRACTICE CONFERENCE RULES	N. R. A. CODE PROVISIONS
1. Sales Below Cost	Article VI, Sec. 1 Sales Below Cost Prohibited
It is an unfair method of competition for any producer, either directly or through his employees, agents, or representatives, to sell, offer to sell, or solicit the sale of, or to consign mixed fertilizer, superphosphate or any other fertilizer material below cost to be determined by a uniform cost accounting system to be approved by this Association unless such sales, offers for sale, solicitations, or consignments are made in good faith to meet existing competition.	The sale or offer for sale by any producer of mixed fertilizer, superphosphate, and/or other fertilizer material at a price below his cost except to meet existing competition is hereby prohibited. The term "cost" as used herein means the cost determined in accordance with uniform methods of accounting which shall be prescribed hereunder by the Fertilizer Recovery Committee with the approval of the National Recovery Administration. Such cost shall properly define the differences in factory, manufacturing, and mixing costs and costs of distributing the product to producers, dealers, agents, and consumers and such differences in cost shall be reflected in the sales price to each of these classifications.

COMMENT

The "new provisions" are, except those hereinafter noted, practically the same as the "old provisions":

1. The "new provision" expressly is applicable to agents, employees or representatives of the producer in addition to the producer himself. The "new provision" expressly precludes doing by indirection that which cannot be done directly.

2. The "solicitation of a sale" is also included in the "new provisions". This is a trifle more stringent than the "old provision".

3. The elements to be considered in determining "cost" were enumerated in the "old provision".

2. Secret Rebates

The granting of secret rebates irrespective of the form they may assume or the method by which they are paid or allowed is an unfair method of competition. The following practices among others are examples of practices which violate this principle and therefore are unfair methods of competition:

a. Billing or invoicing of mixed fertilizer, superphosphate or any other fertilizer material at prices or on terms or conditions which do not reflect actual returns to the producer under the terms of his contract.

Article VIII
Unfair Practices Prohibited

The following shall be deemed to be unfair competition within the meaning of the National Industrial Recovery Act and are hereby prohibited:

Sec. 4. Withholding from or inserting in any invoice a statement which makes the invoice false regarding the whole or any part of the transaction represented on the face thereof.

COMMENT

These are substantially the same.

b. Providing railroad, truck, or other modes of transportation or deliverying mixed fertilizer, superphosphate, or any other fertilizer material without adequately charging for such transportation

Article VIII, Section 5 - Providing transportation without adequate charge for it, or reimbursing the dealer, agent purchaser, or consignee for the costs of transportation if reimbursement is not provided for in the producer's price list.

c. Reimbursing a dealer, agent, purchaser, or consignee for the costs of transportation at any amount other than that set forth in the procuder's contract.

COMMENT

These are substantially the same, reimbursement for transportation under "new" to be in accordance with contract; under the "old" in accordance with filed schedule.

d. Selling, offering to sell, or soliciting the sale of, or consigning mixed fertilizer, chemicals, superphosphate or any other fertilizer material with special commissions or at reduced prices, an an inducement to the buyer or prospective buyer or consignee to purchase mixed fertilizer, superphosphate or any other fertilizer materials.

Article VIII, Sec. 7 - Selling or consigning chemcials and materials with special concessions or at reduced prices, given to induce the purchase of mixed fertilizer, superphosphate, and/or other fertilizer materials.

COMMENT

These are substantially the same, except that "offering to sell, or soliciting the sale of - - - -" is included in the "new".

e. Failur to enforce in good faith the terms of contracts previously made for the sale of mixed fertilizer, superphosphate, or any other fertilizer material.

Article VIII, Sec. 8 - Failure to enforce in good faith the terms of contracts previously made for the sale of mixed fertilizer, superphosphate, and/or other fertilizer material.

COMMENT

These are identical

f. Selling on terms that require the payment of sight draft on presentation of bill of lading (S. D. B. L.) and then waiving the obligation to pay cash before documents or goods are delivered, thus deferring the payment of the cash to some future date.

Article VIII, Sec. 8 a - Selling on terms that require the payment of sight draft on presentation of bill of lading (S. D. B. L.) and then waiving the obligation to pay cash before documents or goods are delivered, thus deferring the payment of the cash to some future date.

COMMENT

These are identical.

g. Selling and delivering goods on time, consignment, or open bill of lading on S. D. B. L. price or waiving earned interest.

b - Selling and delivering goods on time, consignment, or open bill of lading on terms on S. D. B. L. price, or waiving earned interest.

COMMENT

These are identical.

h. Furnishing containers other than the producer's standard containers, preparing special formulas for individual buyers, consignees, or agents, or using special ingredients in standard formulas, or special ingredients, as an inducement to the making of a contract of sale or a sale.

Article VIII, Sec. 9 - Furnishing special containers, preparing special formulas for indvidual buyers or consignees, or using special ingredients in standard formulas, without adequate charge for the cost of such containers, formulas, or special ingredients, as an inducement to the making of a contract and/or sale.

COMMENT

Substantially the same.

i. Making special allowance to buyers, consignees or agents under the guise of advertising expense, or giving any other form of gratuity.

Article VIII, Sec. 10 - Making special allowance to buyers or consignees under the guise of advertising expense, or giving any other form of gratuity.

COMMENT

Substantially the same.

3. Promoting Secret Rebates

Article VIII, Section 11 (a) -

It is unfair method of competition to use methods of soliciting sales and making sales that promote secret rebates and concessions, such as:

Employing a buyer or consignee or his agent ar any one employed by or connected with a buyer or consignee with the purpose, design, and effect of influencing the business of such customer.

a. Employing a buyer or prospective buyer, or consignee, or prospective consignee, or his agent or any one employed by or connected with a buyer or prospective buyer or consignee, or

prospective consignee, with the purpose and design, or effect of influencing the business of such buyer, consignee, prospective buyer or prospective consignee.

COMMENT

Substantially the same.

b. Carrying on books by producer or his agent, as delinquent, balances due by solvent customer with no intention of requiring ultimate payment.

Article VIII, Sec. 11 (b) - carrying on books by seller or consignee as delinquent balances due by solvent customer with no intention of requiring ultimate payment.

COMMENT

Substantially the same.

c. Enabling the purchaser to obtain mixed fertilizer, superphosphate, or any other fertilizer material apparently on cash terms.

1. A transaction covered by a sight draft and bill of lading under which the purchaser or consignee is made to appear as honoring documents upon presentation by payment with his own funds, when in fact the cash involved was obtained in whole or part upon a negotiable instrument (usually discounted at a bank) bearing the endorsement of the producer.

Article VIII, Sec. 12. Enabling the purchaser or consignee to obtain mixed fertilizer, superphosphate, and/or other fertilizer material apparently on cash terms, but in fact on credit extended to him by or through the producer, as, for example: Section 21.

a. A transaction covered by a sight draft and bill of lading under which the purchaser or consignee is made to appear as honoring documents upon presentation by payment with his own funds, when in fact the cash involved was obtained in whole or in part upon a negotiable instrument (usually discounted at a bank) bearing the endorsement of the producer.

COMMENT

These are identical.

2. A transaction by which the producer although he does not actually endorse the obligation, renders himself responsible for its payment if the purchaser

Article VIII, Sec. 12 - b. A transaction by which the producer although he does not actually endorse the obligation, renders himself legally

or agent shall fail to meet his obligation to the bank at maturity.

or morally responsible for its payment if the purchaser or consignee shall fail to meet his obligation to the bank at maturity.

COMMENT

These are identical.

3. Refunding to the buyer or agent, either directly or indirectly, any part of the purchase price on account of goods accepted and/or settled for by the buyer or consignee under the terms of the contract. This practice is commonly referred to as "retroactive settlement".

Article VIII, Sec. 13. Refunding to the buyer or consignee, either directly or indirectly, any part of the purchase price on account of goods accepted and/or settled for by the buyer or consignee under the terms of the contract. This practice is commonly referred to as "retroactive settlement."

COMMENT

These are identical.

4. Rebates. It is recommended that the following practices, which experience has shown to be unsound, be eliminated:

a. Reimbursing buyers or consignees, directly or indirectly, for actual or theoretical warehouse service or facilities.

Article VIII, Sec. 6. "- - - - - -or the making by any producer in connection with the sale of mixed fertilizer, superphosphate, and/or other fertilizer material of an allowance for warehousing not included in his price schedule."

Article VIII, Sec. 10. "- - - - - - or giving any other form of gratuity."

COMMENT

The "new provisions" would prohibit the reimbursement to buyers or consignees for actual warehouse service facilities, whereas the "old" permitted an allowance if it was included in the price schedule.

b. Adopting selling methods which, as experience has amply demonstrated, nearly always promote secret rebates and concessions and put it out of the power of the producer to control them. Reference is here particularly made to the practice of selling through commission agents and others who are irregularly employed and whose compensation is measured in terms of quantity sold. Where experience has shown that commission men and like agents

Article VII, Sec. 2. Sales Through Commission Traveling Salesmen Prohibited. - No traveling salesman shall be employed on a commission basis for the sale of mixed fertilizer, superphosphate, and/or other fertilizer material. Such sales shall be made only through regular, legitimate, salaried salesmen working under the control of the producer. This section shall not apply

customarily resort to split commissions, secret rebates, and similar practices, producer should sell only through regularly employed salaried salesmen and agents responsible to and directly controlled by the producer.

to the State of Florida.

Article VII, Sec. 4. Sales to Dealer and Consumer Through Brokers Prohibited. - The sale by the producer of mixed fertilizer and/or bagged superphosphate to the dealer or consumer through brokers is hereby prohibited.

(The States of Idaho, Utah, Montana, Colorado, Wyoming and Nebraska are exempt from all regulatory rules pertaining to sales.)

COMMENT

These are substantially the same.

5. Defamation of Competitor

The defamation of a competitor by falsely imputing to such competitor dishonorable conduct, inability to perform contracts, questionable credit standing, or by other false representation, or the false disparagement of the grade or quality of his goods, with the tendency or capacity to mislead or deceive purchasers or prospective purchasers is an unfair method of competition.

Article VIII, Sec. 1. The defamation of a competitor by falsely imputing to such competitor dishonorable conduct, inability to perform contracts, questionable credit standing, or by other false disparagement of the grade or quality of his goods, with the tendency and capacity to mislead or disceive purchasers or prospective purchasers.

COMMENT

These are identical.

6. Unearned Commissions or Discounts.

The payment or allowance of unearned commissions or discounts, or of claims known to be false or unjustified, whether in the form of money or otherwise, or extending to certain purchasers special services or privileges not extended to all purchasers under like terms and conditions is an unfair method of competition.

Article VIII, Sec. 2. The payment of an allowance, except as required by law, of rebates, refunds, or unearned commissions or discounts, or of claims known to be false or unjustified, whether in the form of money or otherwise, or extending to certain purchasers special services or privileges not extended to purchasers under like terms and conditions.

COMMENT

Substantially the same.

7. Warehouses

The operation or use by a producer of any warehouse owned or controlled by such producer, or of any warehouse or warehouse space owned, controlled, rented, or used by him or his agent, or employee, for the storage of mixed fertilizer, superphosphate, or any other fertilizer material, in such way or under such circumstances as to result in the granting of rebates or special allowances from the contract, or sales price of any mixed fertilizer, superphosphate, or any other fertilizer material sold or offered for sale by such producer is an unfair method of competition.

Article VIII, Sec. 6. The operation or use by a producer of any warehouse owned or controlled by such producer, or of any warehouse or warehouse space leased by him for the storage of mixed fertilizer, superphosphate, and/or other fertilizer material, in such way or under such circumstances as to result in the granting of rebates, or special allowances from the contract price of any mixed fertilizer, superphosphate, and/or other fertilizer material sold or offered for sale by such producer, or the making by any producer in connection with the sale of mixed fertilizer, superphosphate, and/or other fertilizer material of an allowance for warehousing not included in his price schedule.

COMMENT

Substantially the same, however, the last clause of the "old" should be noted in connection with the"new provision" pertaining to Rebates (7).

8. Inducing the Breach of Contracts.

Knowingly attempting to induce or knowingly inducing the breach of any contract for the sale or consignment of mixed fertilizer, superphosphate, or any other fertilizer material entered into by another producer, by offering a lower price to the purchaser or consignee under such contract, or by any other means is an unfair method of competition.

Article VIII, Sec. 15.

Inducing the breach of any contract for the sale of mixed fertilizer, superphosphate, and/or other fertilizer material by offering a lower price to the purchaser under such contract, or by any other means.

COMMENT

The "new provision" is more stringent because it includes the "attempt" to induce a breach of contract, whereas the "old" only penalized "inducing" the breach of a contract.

9. Misbranding.

The false marking or branding of any product of the industry which has the tendency and capacity to mislead or deceive customers or prospective customers as to the grade, quality, quantity, substance, character, nature, origin, size, finish, or preparation is an unfair method of competition.

Article VIII, Sec. 16.

The false marking or branding of any product of the industry which has the tendency to mislead or deceive customers or prospective customers as to the grade, quality, quantity, substance, character, nature, origin, size, finish, or preparation.

COMMENT

Substantially the same.

10. False and Misleading Advertising

The making or causing or permitting to be made or published of any false, untrue, deceptive or misleading statement by way of advertisment or otherwise concerning the grade, quality, quantity, substance, character, nature, origin, size, or preparation of any product of the industry having the tendency and capacity to mislead or deceive purchasers or prospective purchasers in an unfair method of competition.

Article VIII, Sec. 17.

The making or causing or permitting to be made or published of any false, untrue, or deceptive statement by way of advertisement or otherwise concerning the grade, quality, quantity, substance, character, nature, origin, size, or preparation of any product of the Industry having the tendency and capacity to mislead or deceive purchasers or prospective purchasers.

COMMENT

These are substantially the same.

11. Commercial Bribery.

The giving of money, or anything of substantial value to an employee, agent or representative of a buyer or prospective buyer for the purpose or with the intent or effect of influencing the business of the buyer, or prospective buyer, is an unfair method of competition when done without the knowledge or consent of the buyer or prospective buyer.

COMMENT

Insofar as the N.R.A. Code is concerned there was no provision specifically pertaining to commercial bribery.

13. Price Discriminations

It is an unfair method of competition for any producer engaged in commerce, either directly or indirectly, to discriminate in price between different purchasers because the effect of such discrimination may be the substantial lessening of competition or a tendency toward a monopoly in any line of commerce; Provided, that a producer may discriminate in price between purchasers on account of

1. Differences in the grade, quality, or quantity of the commodity sold, or

2. Because of, and only to the extent of an actual difference in the cost of selling or transportation, or

3. Because such discriminatory prices are made in good faith to meet existing competition.

Article VI, Sec. 2 a "- - - - each producer shall file with the Secretary of The National Fertilizer Association:"

Article VI, Sec. 2 a (2) A schedule by zones of the prices then in effect or to be charged for all grades or kinds of mixed fertilizer, superphosphate and/or other fertilizer material sold or offered for sale to dealers, agents, or consumers by such producer, together with the terms and conditions applicable thereto.

Article VI, Sec. 2b "---------no mixed fertilizer, super-phosphate, and/or other fertilizer material shall be sold or offered for sale by such producer at a price or on terms or conditions other than as specified in said schedule - - - -"

Article VI, Sec. 2 c. " - - - -schedule filed to meet a new or changed schedule filed by a competitor may become effective on the same date and hour that the competitor's schedule becomes effective if a copy thereof is filed with the Secretary of the National Fertilizer Association - - - - - "

COMMENT

These are substantially the same, under the "old" the price schedules filed contained provisions for granting discounts for differences in grade, quality and quantity of the product purchased; there was also allowances made for differences in transportation costs.

13. Guaranteeing Prices Against Decline. Article VIII, Sec. 14

Every purchase and sale transaction denotes a thing sold, a delivery, and a price to be paid and to be received. In order to be effective and enforcible, the transaction should be specific and definite as to each of its elements. While preserving and maintaining the privilege and the right from time to time in good faith to meet existing competition, producers should avoid guaranteeing prices against decline. The effect of such a guaranty is that at the time the goods are shipped the producer does not know the price he will eventually receive them, and the account rendered is opened to controversy and may be subject to settlement at the lowest price that may prevail during the season or that may be quoted to a buyer by a competitor who may be lacking in good faith. This places competitive buyers at a disadvantage and often results in discrimination between consumers.

The guaranteeing of prices against decline to dealers, agents or consumers.

COMMENT

Substantially the same, the "new" merely going in the reasons justifying such prohibition.

14. Private Brands

It is also recommended that producers avoid the practice of making up mixed fertilizers, superphosphate, and/or any other fertilizer material for sale under private brand by dealers, and of preparing special formulas or using special ingredients in standard formulas without making adequate charge for the cost of such formulas or special ingredients or the mixing thereof.

Article VI, Sec. 2 a 2 (supra), and Sec. 8 (supra). Article VII, Sec. 1 - " - - - - - after such grades have been established for such State or zone, the sale or offer for sale therein of mixed fertilizer not conforming to the grades so established shall be considered an unfair trade practice, provided that the sale of special formulas or special ingredients in standard formulas may be made to satisfy bona fide orders from customers if adequate additional charge is made for mixing costs as determined for the particular plant under the uniform accounting methods prescribed in Article VI plus the extra cost of special materials used - - - - - - - ."

COMMENT

These are substantially the same.

15. Reduction and Standardization of Grades.

In order to eliminate waste and reduce the cost of manufacture, bearing in mind the economic interest of the farmer, a list of grades suitable to meet the agricultural needs of each State, or of each District, as the case may be, may from time to time be established by the producers in such District or State acting through a District committee, in cooperation with agronomists and other Federal and State agricultural officials. After such grades have been established for such State or District, the sale or offer to sell therein of mixed fertilizer not conforming to the grade so established is considered an unsound, uneconomic and wasteful trade practice. However, the sale of special formulas or special ingredients in standard formulas may be made to satisfy bona fide orders received from consumers who order, on their own specifications, such special formulas or special ingredients in standard formulas, provided that an adequate charge is made for the mixing thereof.

Article VII - Sec. 1. Reduction in Number of Grades of Mixed Fertilizer.

In order to eliminate waste and reduce the cost of manufacture, bearing in mind the economic interest of the farmer, a list of grades suitable to meet the agricultural needs of each State or of each zone as the case may be, may be established by the producers in such zone or State, acting through a zone committee, in cooperation with agronomists and other Federal and State agricultural officials, subject to the approval of the National Recovery Administration. After such grades have been established for such State or zone, the sale or offer for sale therein of mixed fertilizer not conforming to the grades so established shall be considered as unfair trade practice, provided that the sale of special formulas or special ingredients in standard formulas may be made to satisfy bona fide orders from customers if adequate additional charge is made for mixing costs as determined for the particular plant under the uniform accounting methods prescribed in Article VI plus the extra cost of special materials used; and provided that this shall not prevent any producer from selling or offering for sale two extra grades for lawns and gardens in various-sized packages not to exceed 100 pounds a package.

COMMENT

These are substantially the same.

16. Settlement on S. D. B. L. Shipments.

1. When shipments are made against documents, producers should

Article VIII, Sec. 8. Failure to enforce in good faith the terms of contracts previously made for the sale of mixed fertilizer, superphosphate, and/

sell only on such terms that, to obtain the bill of lading, the purchaser must make payment upon delivery of goods in cash or make settlement by negotiable promissory note for the contract price.

2. If the delivery is made against a promissory note, the note should be made payable at the earliest date consistent with the requirement that the fertilizer should be paid for not later than the time when the crop to which the fertilizer was applied is marketed.

or other fertilizer material, as for example:

a. Selling on terms that require the payment of sight draft on presentation of bill of lading (S.D.B.L.) and then waiving the obligation to pay cash before documents or goods are delivered, thus deferring the payment of the cash to some future date.

b. Selling and delivering goods on time, consignment, or open bill of lading, terms on S.D.B.L. price, or waiving earned interest.

CONTENT

These are substantially the same, although a certain relaxation is permitted in #2 of the "new" as contrasted with the "old."

17. Crop Sharing

Furnishing of mixed fertilizer, superphosphate, or any other fertilizer material by a producer, directly or indirectly, to any consumer with a direct or indirect understanding that payment therefore shall be made by turning over to such producer a quantity, fixed in advance and without reference to the market price, of the crop produced by the use of such fertilizer is an unfair method of competition.

Article VIII, Sec. 18. Furnishing of mixed fertilizer, superphosphate, and/or other fertilizer material by a producer to any consumer with the understanding that payment therefore shall be made by turning over to such producer a quantity, fixed in advance and without reference to the market price, of the crop produced by the use of such fertilizer.

CONTENT

These are substantially the same.

18. Price Reporting Section 1

A. Within five days after a producer becomes a member of the District _____ Fertilizer Producers Fair Practice Association he shall mail by first class mail or deliver to the Secretary

Article VI, Sec. 2. Open Price Schedules.-a. Within five days after this Code becomes effective each producer shall file with the Secretary of The National Fertilizer Association:

1. A statement showing in what zones said producer intends to sell mixed fertilizer, superphosphate, and/or other fertiliz-

of the Association for filing a price list for all grades or kinds of mixed fertilizer, superphosphate, and/or other fertilizer materials for the District or any part thereof in which he intends to do or solicit business.

B. After such price list has been filed, the member may file with the Secretary of the Association at any time a new price list superseding any price list previously filed by him.

C. On the same day that a member mails or delivers a price list to the Secretary of the Association, such member shall mail by first class mail or deliver a true copy thereof to each other member of the Association.

D. Each member, by joining the Association, declares that he understands and has personal knowledge of the fact that the filing of a price list does not in any manner or to any extent bind him to adhere to the prices, terms, and conditions set forth therein and that he may sell, offer for sale, or solicit the purchase of his goods at any prices, or on any terms or conditions acceptable to him: Provided, that he shall not by the use of such prices, terms, or conditions violate the pertinent provisions by these By-Laws and particularly Articles.

E. All price lists shall be dated and shall set forth in clear, concise, and definite language the prices, terms, and conditions which the member intends to use in connection with the sale, offer for sale, or in soliciting purchases of all grades or kinds of mixed fertilizer, superphosphate, and/or other fertilizer materials including, among others, the following:

er material;

2. A schedule by zones of the prices then in effect or to be charged for all grades or kinds of mixed fertilizer, superphosphate, and/or other fertilizer material sold or offered for sale to dealers, agents, or consumers by such producer, together with the terms and conditions applicable thereto; and,

3. Shall mail or deliver true copies of such schedule to his competitors in the zones where such producer does business.

b. If the original schedule so filed by any producer represents any change in his then existing prices, terms, or conditions, it shall not become effective until the expiration of 48 hours after it is filed. After the original schedule is filed, no mixed fertilizer, superphosphate, and/or other fertilizer material shall be sold or offered for sale by such producer at a price or on terms or conditions other than as specified in said schedule or in a new schedule that has become effective pursuant to the provisions of this Section.

c. No new schedule advancing or reducing any price or changing the terms or conditions shall be deemed to have become effective hereunder until a date and hour ten days after it has been filed with the Secretary of The National Fertilizer Association and unless simultaneously with such filing true copies thereof have been mailed or delivered by such producer to other producers in the zones where the producer who files the schedule is doing business except that any such schedule

1. Name of member and address of filing office.
2. Specific geographical area or areas covered by the price list.
3. Point or points from which deliveries are to be made.
4. Method of listing prices, e.g.

   a. Consumer-delivered-to-the-farm.
   b. F.O.B. Factory.
   c. Delivered railroad station.

5. Price of each grade or kind of mixed fertilizer, superphosphate, and/or other fertilizer material.
6. Quantities to which listed prices apply, such as carload or less-than-carload.
7. Definite specifications of containers and differentials, if any, for shipment in other specified containers, or in bulk.
8. Cash and credit terms.
9. Settlement date or dates.
10. Rate of interest and date of maturity of notes.
11. Whether repurchase of bags may be a term or condition of sale, and the allowance for such bags.
12. Agents' compensation.
13. In States where a sales tax is collectible, whether such tax was included in or excluded from the price.
14. All trucking compensations or allowances to purchasers.
15. Wharfage or other port charges, if any.

filed to meet a new or changed schedule filed by a competitor may become effective on the same date and hour that the competitor's schedule becomes effective if a copy thereof is filed with the Secretary of the National Fertilizer Association and copies have been mailed or delivered to other producers in the same zones at least 48 hours before such effective date and hour. Any original, new, or changed schedule when filed shall be open to inspection by any producer.

d. Upon receipt from any producer of any original or new schedule representing a change in prices, terms, or conditions, the Secretary of The National Fertilizer Association shall immediately mail to such producer and to other producers in the zones to which such schedule relates a notice of the date and hour of filing of such schedule and when it becomes effective.

e. There shall be attached to each schedule filed hereunder a statement specifying the changes made therein from the last preceding schedule. The original schedule of each producer filed hereunder shall be numbered "one" and all subsequent schedules or changes in schedules shall be numbered serially in accordance with a uniform plan of numbering prescribed by The National Fertilizer Association.

16. Classes of purchasers to which listed prices are applicable, such as consumers, dealers, private brand companies, wholesale or other cooperative associations, wholesale dealers, or fertilizer manufacturers.

17. Warehousing allowances or compensations applicable in connection with sales.

Section 2. Whenever a member shall have made sales at prices or on terms or conditions different from those contained in his latest price list, he shall, within 24 hours after making such sales, mail by first class mail or deliver to each member and to the Secretary of the Association a report showing whether they were cash or credit sales, purchasers post office (not the purchasers name), together with the tonnage, grade or kind of mixed fertilizer, superphosphate, and/or other fertilizer material sold and the prices, terms, or conditions used which were different from those set forth in his current price list.

Section 3. Each price list filed with the Secretary of the Association shall be available to the public for inspection at the Secretary's office.

COMMENT

In this particular "new provision" there appears the greatest divergence from the "old". In the first instance price lists are to be filed with the Secretaries of the District Association, of which there are to be twelve, whereas under the "old", all price schedules were filed with the Secretary of the National Fertilizer Association.

Second, the price lists which are to be filed are not binding on the filers, while under the "old" any sale or offer to sell at a price or on terms or conditions other than as specified in the filed schedule, or in a new schedule that became effective pursuant to the provisions of Section 2 c, of Article VI, was prohibited.

Third, Under the "new" the waiting period of the "old" is dispensed with.

Fourth, Under the "new" reports of sales made at prices or on terms or conditions different from those contained in the current price lists are to be, within 24 hours, mailed by first class mail or delivered to each member and to the Secretary of the Association. These reports will omit the purchasers name but will designate his/its post office. It should be noted that this merely pertains to

past sales reports. Under the "old", as pointed out in the Second Comment, sales of like nature were absolutely prohibited.

Fifth, Each price list to be filed with the Secretary of the Association, is to be made available to public inspection, whereas under the "old" the price schedules, were only available to inspection by producers.

Sixth, The various data to be set forth in the price list in accordance with Section 1 E are substantially the same as that contained in the price schedules under the "old", and which experience dictates as being necessary for the reasonable attainment of the objectives of the price lists.

19. Liquidated Damages

The plan under consideration contemplates the setting up of corporate organizations that will bring about compliance with or observance of fair trade practice by-laws and other by-laws of the contemplated district associations through the operation of liquidated damage provisions. The proposal is for an agreement through the medium of a membership corporation, between producers of fertilizer who are in competition with each other in a certain territory whereby each member agrees with the others to compensate them in an amount stipulated in advance for the injury caused by his unfair act.

In order to effectuate the liquidated damage plan it is contemplated that a membership deposit be made on the basis of $.25 a ton on previous years business with a minimum deposit of $500 and a maximum of $10,000. Thereafter in case of a violation by a member of any of the by-laws said deposit shall be subject to be assessed in whole or in part as liquidated damages. The rules and procedure for determining such violations and for making such assessments shall be prescribed by the By-Laws. Any amounts deducted from such deposit pursuant to such assessments shall be used to pay the expenses of the corporation. It is further contemplated that at the end of each fiscal year any member desiring to withdraw from the zone association may recall his membership fee, provided it has not been forfeited due to violations of the by-laws.

It is further submitted that, the liquidated damages be on the basis of 25 of the

gross value of the sale or sales wherever the violation is in
wherever the violation is in
connection with a sale or sales
that the amount be $100 for each
violation.

COMMENT

The above noted plan is the means by which the Industry will attempt to obtain observance of the trade practice rules. Such a plan is dependent upon the voluntary cooperation of at least a preponderent majority of the members in the Industry.

Although some N. R. A. Codes contained provision for "Liquidated Damages", such a provision was not contained in the Code for the Fertilizer Industry.

It should be borne in mind that the abovenoted plan as well as the other eighteen proposals are merely tentative and may be changed before presentation to the Federal Trade Commission. However, it is the writer's thought that any changes made will be minor in character and that the abovenoted may be considered as representing substantially that which will be presented and considered at the forthcoming Trade Practice Conference.

APPENDIX II

EXHIBIT 33

OPEN PRICE SCHEDULE FILING UNDER THE FERTILIZER CODE

Prepared for the Tenth Annual Proceedings by F. S. Lodge

Chief, Price Schedule Section, Fertilizer Recovery Committee

The Code of Fair Competition for the Fertilizer Industry, which was signed October 31, 1933, to become effective November 10, 1933, required that each producer file with the Secretary of The National Fertilizer Association, within five days after the Code became effective, a statement of the zones in which he intended to do business and a schedule by zones of prices then in effect or to be charged for all grades or kinds of mixed fertilizer, superphosphate, and/or other fertilizer materials sold or offered for sale, together with the terms and conditions applicable thereto.

Well over a thousand price schedules were received as a result of this requirement. The staff and facilities of the Secretary's office were sorely taxed to care for this flood of schedules. As certain requirements in schedules were imperative, regulations as to the filing of price schedules were prepared, approved, and distributed. Routine methods of handling schedules in the office were worked out, a staff was developed, and by the first of the year most of the difficulties interfering with a smooth working operation had been overcome.

It must be remembered that the entire procedure of operation under the Code and of filing price schedules was new to the industry as a whole; there were no precedents. Therefore, many schedules did not meet the requirements of the Code. As the work progressed it was possible to work out suitable regulations for a producer to follow in making up his schedule, so that order was gradually developed, and the schedules subsequently received were in the main suitable for filing without criticism.

ADMINISTRATIVE ORDER 67-3

On February 6, 1934, the National Recovery Administration issued Administrative Order 67-3, the first three sections of which refer to the filing of open price schedules and read as follows:

"1. Any wholesale cooperative association (a cooperative association of the character described in sub-division a of Section 3 of Article VII) shall have the right to purchase potash, phosphate rock, and/or nitrogen carriers from producers or importers of these materials even though such producers or importers do not file any schedule of prices to dealers and/or consumers in the areas covered by such cooperative association, provided that in all cases where such producers

or importers do not file any schedule of prices to dealers and/or consumers such cooperative association shall itself issue, file, and maintain open price schedules of the character and in the manner specified in Section 2 of Article VI of the Code, and provided further that such cooperative association shall abide by all of the price provisions applicable to producers under said Article VI.

"2. Any producer or importer of potash, phosphate rock, or nitrogen carriers who does not sell to dealers and/or consumers may sell such products or any of them, to any wholesale cooperative association (a cooperative association of the character described in sub-division a of Section 3 of Article VII) without thereby being deemed to be subject to any of the provisions of the Code.

"3. All schedules hereafter filed in compliance with the provisions of Section 2 of Article VI of the Code must provide for the allowance of suitable quantity discounts from the prices listed in said schedules to producers, dealers, agents, and consumers as contemplated in Section 1 of Article VI."

It will be noted that Sections 1 and 2 of this Order permit wholesale cooperative associations to buy materials from producers who do not themselves file open price schedules quoting prices to dealers or consumers, but in such event the wholesale cooperative must itself file an open price schedule as required in Section 2 of Article VI of the Code.

Section 3 of this Order requires that suitable quantity discounts must be provided in every schedule from all prices listed to producers, dealers, agents, and consumers in such schedule.

This Administrative Order is mandatory, and has authority equal to the Code itself. Many schedules filed subsequently to this Order failed to include quantity discounts and refiling was necessary.

TRANSACTIONS WITH AGENCIES OF THE FEDERAL GOVERNMENT

On November 10, 1933, notification was issued by the Comptroller General to the effect that sales to agencies of the Federal Government were exempt from the provisions of codes, and in consequence for a time provisions for such sales were left out of subsequent price schedules. A later Presidential Order of March 14, 1934, required that all transactions with Governmental agencies be handled strictly under Code provisions, and it became necessary for schedules to comply with this Order. These various changes and other minor requirements caused much additional work on the part of producers in the filing of their price schedules, with its natural reflection in additional work in the Secretary's office.

SENDING COPIES OF SCHEDULES TO COMPETITORS

The requirement of the Code making it necessary for a producer to

send true copies of his price schedule to all competitors was at first construed as covering all producers in the zone. In the case of producers of specialty fertilizers, processed manures, and similar materials, this was later deemed an unnecessary requirement, as in most such instances the regular producers were not truly competitors. In the first issue of the Fertilizer Industry Zone List, no distinction was made between these different classes of producers, but in issuing the second edition of the Zone List, a number of separate divisions were made so that unnecessary exchange of schedules could be avoided. A producer of specialty fertilizers or of fertilizers of certain other classes need send his schedule only to those producers listing fertilizers of the same classes, either in a separate schedule or in a general schedule. Waivers to the right to receive competitive schedules may always be asked for, and if they are received no further mailing to such waiving producers is necessary.

HOW PRICE SCHEDULES ARE "FILED"

The routine of the filing of price schedules in the Washington office may be of interest.

Upon receipt of a schedule for filing in the Washington office it is stamped by an automatic time stamp to register the date and hour of arrival. The schedule number is then verified from the producer's last filed schedule. If it is filed to meet competition, the filing date is checked against the effective date of the schedule intended to be met, to determine whether it was received at least the necessary 48 hours before such effective date. If received within such necessary period, the schedule is then carefully compared item by item as to prices, terms, and conditions, with the schedule to be met. Any variations or additions are noted and a telegram is sent to the producer stating the day and hour his schedule will become effective, stating whether the competition has been met, and stating any variations or exceptions from the competitive schedule.

If a schedule is submitted for filing without reference to meeting another schedule or if a schedule is received too late to meet the competitive date of the schedule it is designated to meet, it is carefully read, as to the territory to which it applies and the terms and conditions provided, to see that an entire subzone or zone has been covered, that all necessary requirements have been met, that nothing considered violative of the Code is included, and that all terms and conditions are definitely stated. A telegram is then sent to the producer giving him the effective date and calling attention to any points questioned.

A letter is also sent to any producer who files a schedule with questionable features, or containing indefinite or violative provisions, pointing out these matters that are believed improper and requesting a new filing.

A list of all schedules filed, including their effective dates and including reference to any questionable features, is mailed three times a week to every producer in each zone. This List of Filed Price Schedules (frequently referred to as the Green Sheet) also indicates by an asterisk and footnote any price schedule filed by a firm or individual that has not been listed in the Zone List as a producer.

After being listed, each schedule is bound into a folder marked with the name of the producer and the zone or subzone to which it applies. All schedules previously filed by this producer for this particular zone or subzone are in this same folder, so the entire record of the filing is in one place. For ready reference these folders are kept in alphabetical order of producers, and by sub-zones in metal cabinets.

VARIATIONS IN MAKE-UP OF SCHEDULES

It is interesting to note the wide variation in the make-up of price schedules, all designed to achieve the same result, Some schedules cover as many as 75 sheets of 8½ x 11 paper, others accomplish their purpose in two or three pages, some even on one page. It is entirely within the right of a producer to file his schedule as he elects, provided it is not violative of the Code and contains the necessary information required by the Code and by the Regulations Covering the Filing of Open Price Schedules. Many go far beyond the necessities. Certain schedules include a copy of entire sections of the Code itself; others state the firm will carry on some definite operation, according to the provisions of the Code. It should be remembered that the Code is the law; its reptition in a price schedule is entirely superfluous. In some schedules the same provision is stated as many as three times; to state it once and then carry it out is sufficient.

Schedules have been submitted for filing in many forms - on post cards, on tags, on cotton cloth, on cardboard; printed, typed, and long-hand; delivered by messenger, by mail, by air mail, by special delivery, by registered mail, and by telegraph.

Not all of these schedules could be filed, as not all met the requirements. At present, we have over 2,200 individual price schedules in effect. Each filing in each zone or subzone is an individual schedule. Some firms have as many as 15 successive filings in one subzone. Fully 10,000 schedules have been filed since the signing of the Code. Even since the November filings as many as 225 schedules have been received in a single day, approximately half of which were to meet specific competition, requiring word-by-word comparison to see that competition was actually met. In one case a schedule listing F.O.B. factory cash prices to dealers was filed to meet the competition of a schedule listing delivered-to-the-farm time prices to consumers. Detailed calculation was necessary on every grade to establish whether or not the competition had been met. In one case a single schedule was filed to meet the competition of fourteen other producers on separate items or groups of items. Under the present regulations approved by NRA,

a schedule filed to meet the competition of another schedule may not be different from the schedule being met. This means that prices, terms, and conditions must be the same in both. Under these regulations, schedules of the kind just referred to would not be proper to meet the competitors schedules.

NECESSARY PROVISIONS IN SCHEDULES

It seems desirable to direct attention to the items that are essential in a price schedule in order that it may meet the provisions of the Code and the Regulations Covering the Filing of Open Price Schedules.

1. It must contain the name and address of the company, with the correct schedule number and zone.

2. It must contain a list of all grades and kinds of fertilizer and of all materials to be offered for sale, together with the prices thereof; must show to whom these prices apply, and must set forth the terms and conditions under which sales are to be made.

3. It must contain a method for pricing such bona fide orders from consumers as may be received for grades or kinds of fertilizers not listed, if such orders are to be filled.

4. It must state clearly the delivery point of all sales.

5. It must state definitely the terms of payment.

6. It must state the type and size of package.

7. It must set forth quantity discounts for all items listed and to all types of buyers or agents.

8. A statement of all changes from the last preceding schedule must accompany each schedule.

In addition, a producer should set forth in his schedule any other matters incident to the prices, terms, and conditions under which he intends to operate his business. He must provide for his method of distribution and of compensating his distributors, if any. If delivery charges or transportation allowances are to be made, definite provisions for such must be included. If the producer wishes to repurchase his used bags, he must state the price at which such purchases will be made. He must provide for all the terms and conditions under which he will operate. (One producer contended that since his schedule did not prohibit a certain type of quotation he was entitled to make such quotation.) A schedule furnishes the information as to how the producer will operate his business, and he can operate it in no other way.

SPECIAL FORMULAS

One schedule submitted for filing provided no list of grades to be offered for sale, but included the statement that any grade of mixed goods would be sold on the basis of the cost of the required quantity of the raw materials listed plus a stated mixing charge. Such a schedule is considered in violation of the Code, which requires that all grades and kinds of mixed fertilizers to be offered for sale must be listed, together with their prices, terms, and conditions. Furthermore, definite prices could not be determined from such a schedule unless a master formula were included in the schedule, since the unit costs of the various materials differ. In accordance with the Code provisions, the Fertilizer Recovery Committee has declared that each schedule filed must list each grade or kind of mixed fertilizer, superphosphate, and/or other fertilizer material to be sold or offered for sale to dealers, agents, or consumers. This is not to be construed to prevent the sale of special formulas or special ingredients in standard formulas to satisfy bona fide orders actually received from consumers. Prices for such special formulas must include an adequate additional charge for mixing, as well as the extra cost of special materials used.

ADDITIONAL GRADES MAY BE LISTED

The Fertilizer Recovery Committee has also adopted a resolution to the effect that additional grades or kinds may be added to a schedule by filing a new page or new pages covering such additional grades or kinds and the prices thereof, properly identifying such pages with the schedule to which they relate; but no change in prices, terms, or conditions may be made without filing a new schedule.

ANALYSES OF MATERIALS

Many fertilizer materials are bought on the basis of analysis. Any such material listed in a schedule must have its particular analysis stated along with the price for that analysis. Since in many instances the analysis of different lots of a material varies more or less, a provision should be made for adjusting the price in accordance with the variation in analysis. Unless such a provision is made in a schedule, no variation from the listed price may be made, neither may the material be sold under the schedule if it varies from the listed analysis. There may be many satisfactory ways of wording such a statement. One method considered as meeting the requirements could read as follows:

Ground Tobacco Stems 2½% Ammonia
6% Potash $----------per ton
For other Grades of Tobacco Stems add or deduct $----- per unit of Ammonia and $-----per unit of Potash.

GEOGRAPHICAL AREA

Each schedule filed must cover an entire zone or subzone as the case may be. Reference to schedules is made almost entirely by schedule number and zone or subzone. If more than one schedule

number were in effect in a subzone at one time, endless confusion would result. As many different prices may be made for different parts of a zone or subzone, on any item or items, as a producer may wish, so long as he clearly describes the area to which each individual price is applicable and covers the entire zone or subzone at each filing. If a producer does not intend to operate over an entire zone or subzone, he may file prices for that part in which he intends to operate and include "no sale" provisions for that part of the subzone in which he does no business.

CORRECTION OF TYPOGRAPHICAL ERRORS

In the haste of preparing schedules for filing, many typographical errors have been made. If an error is discovered promptly and a correcting telegram is sent immediately to the Secretary of The National Fertilizer Association so that such notice is received before the schedule is listed in the List of Filed Price Schedules the error may be corrected by notifying by letter all competitors and sending a copy of the letter to the zone secretary and to the Secretary of The National Fertilizer Association, such letter to state clearly the error and the correction, and to carry the statement that the correction was reported to the Secretary of The National Fertilizer Association before the schedule was listed. A schedule once listed may not be corrected, as it is then an official document as filed.

WITHDRAWAL OF SCHEDULES

Because of serious error or for other important reason, a producer may wish to withdraw a schedule after it has been filed. This may be accomplished if written notice of the intent is delivered to the Secretary of The National Fertilizer Association at least 48 hours before the effective date of such schedule, and if notices of withdrawal are delivered or mailed to all competitors and to the zone secretary simultaneously with the mailing or delivery of the notice to the Secretary of The National Fertilizer Association. After the expiration of the period ending 48 hours before the effective date of a schedule it may not be withdrawn, although it may be superseded by a price schedule or a no-sale schedule.

IMPROPER PROVISIONS

Many improper phrases appear in schedules submitted. The Code requires that schedules shall list the prices, terms, and conditions covering sales and offers for sale. This can mean only that all such features in a schedule must be definitely determinable. Such expressions as "not more than," "minimum prices," and "to facilitate collections we may waive interest" are not definite and do not belong in price schedules. No item may have two prices in effect under the same terms and conditions at any point. A competitor has the right to be able to determine from a schedule exactly what price any particular item will carry at any given point.

EFFECTIVE DATE

A schedule ordinarily becomes effective 10 days after its receipt for filing. It may not become effective before that time unless filed to meet competition. A producer may have his schedule become effective on a date specified therein, provided such schedule is received for filing at least 10 days before such specified date. Unless some specific date is particularly important to the producer, it is requested that no effective date be mentioned in a schedule, as uncertainty in the mails may cause such date to be inoperative and cause confusion on account of the 10-day specification.

SELF-LIMITED SCHEDULES

Unless limited by its own provisions, a schedule remains in effect until superseded. If self-limited, the provisions as outlined in the schedule must be adhered to rigidly.

SCHEDULES SHOW IMPROVEMENT

On the whole, schedules now being submitted for filing are complying very satisfactorily with the Code and the Regulations, since producers are becoming more and more familiar with the requirements. As time passes and experience under Code operation is had, we believe every producer will be able to file complete and definite schedules complying with the Code in every particular and embodying the prices, terms, and conditions under which his sales and offers for sale will be made.

APPENDIX II
EXHIBIT 34
Price schedules filed 1/ in the Fertilizer Industry
January 1, 1934 --- January 23, 1935

(A, total schedules filed; B, schedules filed to meet competition)

	1934												1935	
	January	February	March	April	May	June	July	August	September	October	November	December	January 23,	Total for period
Zone 1:														
A.....	135	160	38	53	3	4	1	8	35	14	11	95	35	572
B.....	83	93	5	7	0	0	0	0	29	7	6	70	9	309
Zone 2:														
A.....	155	183	103	26	6	95	44	51	22	35	9	65	109	905
B.....	33	110	41	6	0	61	12	14	7	24	0	47	43	398
Zone 3:														
A.....	190	254	158	45	3	176	76	79	68	89	10	78	114	1,240
B.....	97	162	72	9	0	116	15	15	30	67	0	49	46	678
Zone 4:														
A.....	106	175	73	61	15	127	124	53	156	28	101	95	30	1,144
B.....	24	87	12	24	2	73	66	0	91	3	45	28	2	457
Zone 5:														
A.....	73	89	26	8	17	57	40	26	53	34	35	50	35	543
B.....	5	27	2	2	1	12	26	11	27	11	11	21	4	141
Zone 6:														
A.....	114	162	65	11	11	71	39	8	30	39	43	51	55	699
B.....	6	46	11	3	2	23	5	1	13	4	14	5	14	147
Zone 7:														
A.....	28	34	15	19	11	34	26	26	31	18	21	13	11	287
B.....	1	7	1	1	0	0	10	0	7	4	4	5	1	40
Zone 8:														
A.....	86	133	104	21	8	60	65	35	87	42	58	60	53	812
B.....	25	43	46	3	1	23	33	11	55	11	43	31	22	347
Zone 9:														
A.....	50	47	8	1	1	6	14	13	17	15	4	26	35	237
B.....	22	28	0	0	0	0	12	2	6	8	0	11	12	101
Zone 10:														
A.....	6	61	163	39	5	22	216	42	23	9	5	18	171	800
B.....	0	37	110	3	0	0	161	10	1	0	0	1	110	438
Zone 11:														
A.....	33	19	12	8	5	0	4	7	11	12	2	3	3	119
B.....	2	3	1	0	0	0	2	1	3	2	0	3	0	17
Zone 12:														
A.....	34	64	65	18	6	7	10	41	76	61	36	52	10	480
B.....	1	31	8	0	0	1	0	19	26	7	3	6	2	104
Zone 2PR:														
A.....	8	2	0	0	2	3	0	5	9	10	10	1	1	51
B.....	0	1	0	0	0	0	0	2	2	4	7	0	0	16
Total for all Zones:														
A.....	1,018	1,385	830	310	93	662	659	394	818	406	345	607	662	1/7,889
1/B.....	299	675	309	68	6	309	542	86	297	152	133	258	965	1/3,192

Schedules covering special mixtures, manures, peat, humus, lime & phosphates omitted.

APPENDIX II

EXHIBIT 35

ADMINISTRATIVE STAFF OF THE FERTILIZER RECOVERY COMMITTEE:

CHARLES J. BRAND, Executive Director and Secretary:

Native of Minnesota (1879) and graduated from the University of Minnesota (1902). Entered U.S.Department of Agriculture December 1903, serving in various scientific capacities until May, 1913, when he was appointed Chief of the Bureau of Markets. Mr. Brand assisted in and supervised the drafting of, and later, administered (1) United States Cotton Futures Act, (2) Grain Standards Act, (3) United States Warehouse Act, (4) Standard Container Act, and (5) Food Products Inspection Law. He prepared the foundation draft of the Food Control Act, and directed various war-time activities, including the food and fertilizer surveys of the United States, licensing of stockyards and other market agencies, market inspection of perishables, purchase and distribution of nitrate of soda. Under the War Industries Board, he was Chairman, Committee on Cotton Distribution; member, Wool Advisory Board, liquidating officer of Wool Section, by appointment of President Wilson.

From 1919 to 1922, Mr. Brand was Vice-President and General Manager, American Fruit Growers, Inc., Pittsburgh, Pennsylvania, an organization that produces and/or markets over 30,000 carloads of perishables annually.

From 1922 to 1925, he was Consulting Specialist in Marketing to the Secretary of Agriculture; Chief of the Economic Section of the Packers and Stockyards Administration; assisted in the administration of United States Grain Futures Act; and prepared the first agricultural relief measure - the McNary-Haugen Bill - with the assistance of George N. Peek and General Hugh S. Johnson.

Since 1925,Mr. Brand has been Executive Secretary and Treasurer of the National Fertilizer Association, and now, in addition, Executive Director, Fertilizer Recovery Committee, the Code Authority for the Fertilizer Industry.

From May 15, 1933 to September 30, 1933, by request of President Roosevelt, Secretary Wallace, and George N. Peek, and with the unanimous approval of the Executive Committee of the N.F.A., served as Co-administrator of the Agricultural Adjustment Administration. Under Mr. Brand's direct supervision, the staff of the Administration was built up from less than 10 when he took the oath of office to 3,228 on the day his resignation took effect.

D.S. MURPH, Administrative Assistant.

Native of South Carolina and has been closely identified with agricultural interests and activities all his life. He holds the degree of A.B. from Wofford College, Spartanburg, South Carolina, the

degree of A.M. from Trinity College (now Duke University), Durham, North Carolina, and the degree of LL.B. from Georgetown University, Washington, D.C.

1913 - 1917 Secretary, Committee on Agriculture, U. S. House of Representatives, during the whole period leading up to our participation in the World War.

1917 - 1920. Chief, Cotton Marketing Division, Bureau of Markets, U. S. Department of Agriculture, in direct charge of the administration of the United States Cotton Futures Act, the preparation and distribution of the United States Cotton Standards, and cotton grading, marketing, and spinning investigations.

1920 - 1933. Engages in the general practice of the law in South Carolina, serving from time to time, by appointment of the Governor, as Special Judge of the Circuit Courts of that State.

June 1933 - January 1934. Came to Washington at the urgent request of the Administrators of the Agricultural Adjustment Administration. Organized the handling of the 1933 Cotton Production Control program under which benefit payments totaling approximately $130,000,000 were disbursed. Later was appointed Chief of the Cotton Processing and Marketing Section, and in this capacity was largely responsible for working out the processing and compensating taxes relating to cotton.

January 3, 1934. Resigned to accept position with the National Fertilizer Code Authority. He was primarily responsible for handling interpretations, explanations and opinions relating to the Code and open price schedules.

JOSEPHINE M. FEELEY, Executive Assistant and Assistant Secretary.

Native of New Haven, Connecticut, and commercial college graduate.

1917 - 1920. Engaged in various clerical positions in U. S. Department of Agriculture.

1920 - 1925. Employed in secretarial and reporting work with various law firms in Washington, D.C.; also secretary of Alaska Coal and Coke Company.

1925 - 1934. Office Manager, The National Fertilizer Association.

January, 1934. Elected Assistant Secretary of Code Authority, and designated Executive Assistant.

H. R. SMALLEY, Chief Agronomist.

Native of Indiana and a graduate of Purdue University (1911), with Master's degree in Agricultural Chemistry (1913).

1911 - 1913. Assistant Chemist at the Indiana Agricultural Experiment Station.

1913 - 1914. Office of "Farm Management", U. S. Department of Agriculture.

1914 - 1919. Served as County Agricultural Agent in the Indiana Extension Service.

January 1, 1920 - 1934. Has served with the National Fertilizer Association as field agronomist in the Middle West; as Agronomist and Director, Northern Division, Soil Improvement Work; as Director of both Northern and Southern Divisions of that work; as Chief Agronomist of the Association; and Managing Editor of the FERTILIZER REVIEW. In the course of his service with the Association, Mr. Smalley has initiated and directed much sales promotion and marketing research work. In connection with the Code, he handles, primarily, questions of agriculture relationships and problems arising under Article VII, Section 1 - Reduction in the Number of Grades of Mixed Fertilizer.

F. S. LODGE, Chief, Open Price Filing Section.

Native of Illinois, (1884). Graduate, University of Illinois with degree of Bachelor of Science in Chemical Engineering (1908).

1908 - 1915. Chemist, Assistant Chief Chemist, Armour & Co., and Chief of Chemical Control, Armour Fertilizer Works, Chicago, Illinois.

1915 - 1931. Assistant Director of Manufacturing, Armour Fertilizer Works. In charge of all manufacturing and maintenance operations in the twenty-five factories of the company. Responsible for the company's compliance with requirements of the Federal and State statutes covering manufacturing in general, including Employees Liability Insurance, Labor, and Special Fertilizer Laws.

1916 - 1931. Either acting or appointed Chairman of the Chemical Control Committee of the National Fertilizer Association. As such, represented industry in many conferences with Federal and State Officials and legislative committees on new legislation proposed and on interpretations and compliance of the industry with laws already in effect.

1931 - 1932. Special investigation work with the Chicago Better Business Bureau.

1933 - 1934. Vice President and General Manager, Canisteo Sign and Manufacturing Company, Canisteo, New York.

January, 1934 - 1935. Chief, Open Price Schedule Section, Fertilizer Recovery Committee, Washington, D.C.

JAMES A. MULLALLY, Chief, Compliance Section.

Native of North Dakota (1899). Graduate of Georgetown University School of Law (LL.B.) in 1928. Admitted to bar of Supreme Court of North Dakota in 1927.

1917 - 1923. With Great Northern Railway, Grand Forks, N.D.

1923 - 1925. With Fruit Growers Express, Washington, D.C.

1925 - 1928. Clerk, United States Senate.

1928 - 1934. Attorney, Federal Trade Commission, investigating and assisting in trials of numerous corporations for using trade practices in violation of Federal Trade Commission and Clayton Acts. Also investigated violations of Sherman Act and Securities Act of 1933, specially assigned to decision as to admissibility and sufficiency of evidence and preparation of recommendations to Commission as to proper procedure.

March, 1934. Placed in charge of Compliance Work, Fertilizer Recovery Committee.

JOHN M. F. DONOVAN, Field Investigator.

Native of Massachusetts, a graduate of the University of Maine, (1924) and has taken his M. A., Ph. D., and two law degrees at Georgetown University, Washington, D.C. Served as professor of political science at Georgetown and at Fordham University, New York (1925 -1927), and after other teaching experience, was legal and economic analyst of the U. S. Department of Labor; then attorney for the Federal Trade Commission in Washington. Now for nearly five years he has conducted anti-trust law investigations from the New York office of the Federal Trade Commission.

JOHN MORAN, Cost Accountant.

Native of Virginia, 1894, and educated in the public schools

of Norfolk and William and Mary Extension College. Mr. Moran is a member of the American Society of Certified Public Accountants and the National Society of Cost Accountants.

1917 - 1925. Cost Accountant and Traveling Auditor, F. S. Royster Guano Co., actively engaged in cost and accounting work relative to operation of sulphuric acid, superphosphate, and dry mixing fertilizer plants.

1925 - 1928. Public Accountant on staff of A. Lee Rawlings & Co., Norfolk, Va., and Raleigh, N.C.

1928 - 1930. Practiced public accounting in Virginia and North Carolina under partnership name of Bundy and Moran, Elizabeth City, N.C.

1930 - 1934. In charge of cost accounting work, the National Fertilizer Association, and co-author of its cost accounting digests.

FIELD STAFF.

ZONE #1. STEPHEN J. GILMAN (Office, Boston, Mass.)

Mr. Gilman has, since 1928 been engaged in business for himself as a merchandising counsel. He is a graduate of the Harvard Law School, practiced for a number of years, and has been engaged in the following business enterprises; credit man for Firestone Tire and Rubber Company, Akron, Ohio; sales manager, Thomas G. Plant Co. (shoes), Jamaica Plains, Mass; sales and advertising manager, Ground Gripper Shoe Co., Boston, Mass.; assistant to President of Lewis A. Crossett Shoe Co., Boston, Mass.

ZONE #2. W. L. GAY (Office, New York)

Mr. Gay has been connected with the fertilizer industry since 1915. He studied agriculture and general science at Rutgers University. He was employed by Swift & Company as salesman and sales manager from 1915 to 1920, and by George F. Taylor & Co., in the fertilizer brokerage business from 1920 to 1922. From 1922 to 1926 he was manager of the Fertilizer Department of the Cooperative G.L.F Mills, Inc., and since 1926 until his resignation which became effective on January 31, 1934, he has been with the Summers Fertilizer Company as Vice President and Director.

ZONE #3. J. P. F. RITZ (Office, Baltimore, Md.)

Mr. Ritz has had a long and successful experience in the fertilizer industry. He began work for the Miller Fertilizer Co., of Baltimore in 1896, and remained with that company until 1933. He

was Vice President for 21 years and for a time President of the Company. In 1932 and 1933 Mr. Ritz was also Vice President of the Davison Chemical Company. He attended private schools and the Baltimore Polytechnic Institute.

ZONE #4. C. F. CROCKER (Office, Wilson, N.C.)

Mr. Crocker is well known in the fertilizer industry in the Zone. For a number of years he was connected with the American Agricultural Chemical Corporation as manager of its Norfolk office. Later he was connected with the Eastern Cotton Oil Co., and still later with the Davison Chemical Co. For some time he was engaged in the practice of law at Seaboard, N.C.

ZONE #5. JENKINS M. ROBERTSON (Office, Columbia, S.C.)

Mr. Robertson has had a wide business experience, connected for the most part with the cotton and fertilizer industries. He is a graduate of Citadel Military College at Charleston, and was for several years engaged in the fertilizer brokerage business in Charleston and Richmond.

ZONE #6. B. F. WOODRUFF (Office, Atlanta, Ga.)

Mr. Woodruff is a native of Georgia and a graduate of Washington and Lee University where he received his A. B. degree in 1916 and his LL.B. in 1921. He has practiced law for the past 12 years, first with the firm of Denny & Wright of Rome, Georgia, then from 1922 to 1930 with Randolph, Tucker & Forntner of Atlanta, and since 1930 as a partner in Randolph and Woodruff.

ZONE #7. HARRY C. HARRIS (Office, Orlando, Florida)

Mr. Harris is a native of Pennsylvania, a graduate of the University of Pennsylvania, and studied law at Columbia and New York Universities. He specialized in business administration and commerce and practiced law in New York for a number of years. From 1929 to 1932 he was a member of the staff of the International Telephone and Telegraph Company. He has had experience in corporation organization, business, tax, finance and insurance law.

ZONES # 8 and #9. E. L. ROBINS (Office, Montgomery, Alabama)

Mr. Robins served as Zone Secretary in these two Zones. He is well known and highly regarded in the industry. He has been President of Meridian Fertilizer Factory for many years and has been active in Association work, having served as President of the Southern Fertilizer Association and as Vice President of the National Fertilizer Association. He has also been a member of the Board of Directors, and Chairman of his District Committee. He is a graduate of the Mississippi Agricultural and Mechanical College, and was formerly State Chemist of Mississippi.

ZONE #10. JOHN W. SAMPLE (Office, Indianapolis, Indiana)

Mr. Sample is a native of North Carolina (1881) and did his under-graduate and post-graduate work at Virginia Polytechnic Institute. He spent fifteen years as State Chemist of Tennessee, administering its fertilizer, feed and seed laws; also served as Executive Secretary for three and one-half years, Southeastern Millers Association, and later returned to State service for three years as Chemist and Dairy Commissioner.

ZONE #11. FLOYD OLES (Office, Seattle, Washington)

Mr. Oles is manager of the Northwest Fertilizer Association and has had much experience in association work. Mr. Oles is also manager of the Pacific Northwest Feed Association and of the Northwest Produce Administration, Inc. He is Executive vice-President of the National Federation of Feed Associations, a member of the Executive Committee of the National Feed Recovery Committee, and a member of the National Code Authority of the fruit and produce distributive industry. Mr. Oles has for a number of years cooperated heartily with this association and has been helpful in many ways.

ZONE #12. GEORGE P. GRAY (Office, Los Angeles, California)

Mr. Gray was formerly director of the Soil Improvement Committee, California Fertilizer Association. With the exception of the past year he has been connected with the fertilizer industry since 1926, having done research and educational work for the American Cyanimid Company from 1926 to 1931. He was Chief of the Division of Chemistry, California Department of Agriculture, 1920 to 1926. He received his Master's Degree from the University of California in 1911, and from 1911 to 1920 he was with the California Experiment Station and University as chemist and instructor in insecticide work.

ZONE EXECUTIVE COMMITTEES

ZONE #1.

George V. Savitz, International Agricultural Corporation, Boston, Mass.
C. G. Ward, American Agricultural Chemical Corporation, North Weymouth, Mass.
E. S. Davis, Rogers & Hubbard Company, Portland, Conn.
A. F. Detweiler, Armour Fertilizer Works, Presque Isle, Maine.
Evan H. Jones, Apothecaries Hall Company, Waterbury, Conn.
Frank P. Morrison, Morrison Brothers, Bangor, Maine.
P. J. Sullivan, Aroostook Federation of Farmers, Caribou, Maine.

ZONE #2.

Horace Bowker, American Agricultural Chemical Corporation, New York City, N.Y.
J. S. Coale, I. P. Thomas & Son Company, Philadelphia, Pa.
F. H. Tunnell, F. W. Tunnell & Company, Philadelphia, Pa.
W. J. Gray, Armour Fertilizer Works, New York City, N.Y.
W. T. Hart, American Agricultural Chemical Company, New York, N.Y.
Raymond Hutchinson, Trenton Bone Fertilizer Company, Trenton, N.J.
Robert A. Reichard, Robert A. Reichard, Inc., Allentown, Pa.

SUB - ZONE #2. (Puerto Rico)

C. C. Arledge, Armour Fertilizer Works, San Juan, P.R.
Amos J. King, Nitrate Agencies Company, San Juan, P. R.
Luis R. Gonzales, Ochoa Fertilizer Corporation, San Juan, P.R.
Jenaro San Miguel, Sucrs. San Miguel Hnos., Bayamon, P.R.
George W. Whiting, Standard Wholesale Phosphate & Acid Works, Baltimore, Md.

ZONE #3.

Wm. E. Valliant, Valliant Fertilizer Company, Baltimore, Md.
B. H. Brewster, III, The Baugh & Sons Company, Baltimore, Md.
W. Newton Long, The Central Chemical Company, Hagerstown, Md.
John L. Morris, W. B. Tilghman Company, Salisbury, Md.
H. B. Ramsburg, The Ramsburg Fertilizer Company, Frederick, Md.
George A. Whiting, Standard Wholesale Phosphate & Acid Works, Baltimore, Md.
M. O. Wilson, American Agricultural Chemical Company, Baltimore, Md.

ZONE #4.

G. A. Holderness, Virginia - Carolina - Chemical Company, Richmond, Va.
O. F. Smith, Smith - Douglass Company, Norfolk, Virginia.
G. T. Cunningham, Armour Fertilizer Works, Greensboro, N.C.
R. C. Adams, Robeson Manufacturing Company, Lumberton, N.C.
A. C. Diehl, Nitrate Agencies Company, Wilmington, N.C.
Charles A. Flynn, Washington Fertilizer Company, Washington, N.C.
W. T. Wright, F. S. Royster Guano Company, Norfolk, Virginia.

ZONE #5.

J. Rose Hanahan, Planters Fertilizer & Phosphate Company, Charleston, S.C.
P.C. Townsend, Virginia - Carolina - Chemical Corporation, Columbia, S.C.
W. F. Farmer, Anderson Fertilizer Company, Anderson, S.C.
R. L. Payne, American Agricultural Chemical Corporation, Columbia, South Carolina.

A. F. Pringle, Merchants' Fertilizer Company, Charleston, S.C.
F. T. Smith, Smith-Wilkinson Company, Charleston, S.C.
A. E. Tisdale, Sumter Fertilizer Manufacturing Co., Sumter, S.C.

ZONE #6.

A. D. Strothar, Southern Fertilizer & Chemical Company, Savannah, Ga.
H. B. Baylor, International Agricultural Corporation, Atlanta, Ga.
E. W. Fowler, Covington, Georgia.
E. R. Hodgson, Empire State Chemical Company, Athens, Ga.
R. L. King, Georgia Fertilizer Company, Valdosta, Georgia.
J. B. Shepard, Shepard Fertilizer Company, Doerum, Georgia.
J. A. Woods, Armour Fertilizer Works, Atlanta, Georgia.

ZONE #7.

C. T. Melvin, The Gulf Fertilizer Co., Tampa, Florida.
Bayless W. Haynes, Wilson & Toomer Fertilizer Co., Jacksonville, Fla.
W. H. Klee, Nitrate Agencies, Jacksonville, Florida.
F. F. Coffee, Armour Fertilizer Works, Jacksonville, Florida.
Sam Laird, Waverly Fertilizer Works, Waverly, Florida.
Frank B. Rue, Florida East Coast Fertilizer Co., Homestead, Fla.
W. L. Waring, Jr., Lyons Fertilizer Company, Tampa, Florida.

ZONE #8.

E. A. Brandis, Standard Chemical Company, Troy, Alabama.
J. M. Rawlings, F. S. Royster Guano Co., Montgomery, Alabama.
H. A. Parker, Sylacauga Fertilizer Co., Sylacauga, Alabama.
James W. Dean, Knoxville Fertilizer Company, Knoxville, Tenn.
A. A. Green, Jr., Jackson Fertilizer Company, Jackson, Miss.
J. A. Howell, Virginia-Carolina Chemical Corporation, Jackson, Miss.
E. F. Jackson, Piedmont Fertilizer Company, Opelika, Alabama.

ZONE #9.

P. H. Manire, Marshall Cotton Oil Company, Marshall, Texas.
C. D. Shallenberger, Shreveport Fertilizer Works, Shreveport, La.
C. R. Croft, Arkansas Fertilizer Company, Little Rock, Ark.
J. W. Anthony, Swift & Company, New Orleans, La.
D. B. Brown, Temple Cotton Oil Company, Little Rock, Ark.
Douglas Kelly, Armour Fertilizer Works, New Orleans, La.
R. E. Montgomery, Palestine Oil Mill & Fertilizer Co., Palestine, Texas.

ZONE #10.

Jno. A. Miller, Price Chemical Company, Louisville, Kentucky.
J. M. Stahl, Swift & Company, Hammond, Indiana.
George Kingsbury, Kingsbury & Co., Indianapolis, Ind.
J. J. O'Leary, American Agricultural Chemical Company, Detroit, Michigan.
H. A. Smith, Smith Agricultural Chemical Company, Columbus, Ohio.
C. O. Spiker, Stadler Products Company, Cleveland, Ohio.
Otto Voyles, The Tennessee Corporation, New Albany, Ind.

ZONE #11.

H. C. Taylor, Magnolia Fertilizer Company, Seattle, Washington.
V. G. McKillop, Balfour, Guthrie & Co., Seattle, Washington.
G. R. Claeo, Swift & Company, North Portland, Oregon.
W. R. Lebo, Marine By-Products, Seattle, Washington.
F. E. Peterson, Portland, Oregon.

ZONE #12.

Weller Noble, Pacific Guano & Fertilizer Company, Berkeley, Calif.
Jos. G. Lewis, Growers' Fertilizer Company, San Francisco, Calif.
W. F. Price, Swift & Company, Ontario, California.
A. L. Chandler, Mutual Orange Distributors, Los Angeles, Calif.
George W. Fuhr, Azusa, California.
Wilson Meyer, Wilson & George Meyer & Co., San Francisco, Calif.

APPENDIX

EXHIBIT 36

Budgets of the National Fertilizer Association
1925 - 1935

The income of the National Fertilizer Association has been primarily obtained from assessments on a tonnage basis of materials sold by members. Non-members have contributed substantial amounts and there have been miscellaneous sources of revenue. During the depression the activities of the Association were curtailed, the budgets and assessments being reduced in keeping with the activities.

In the earlier years of the reviewed budgets typical assessments were 4 cents per ton on mixed goods sold (3 cents in 1927-28), 1½ cents per ton on bulk superphosphate, and 2 cents per ton for active members producing and importing raw materials.

	July 1, 1925 June 30,1926	July 1, 1926 June 30,1927	July 1,1927 June 30,1928	July 1, 1928 June 30,1929
Active Members	$208,633.08	$197,048.91	$140,667.11	$209,461.50
Associate Members	6,700.00	6,750.00	5,350.00	5,825.00
Non-Members	24,350.00	18,750.00	16,200.00	16,100.00
Interest	1,705.28	5,682.20	2,658.01	2,086.25
Sale of publications Northern	6,060.75	11,139.31	9,737.56	7,997.33
Sale of publications Southern	2,892.12	4,504.05	2,128.19	1,872.05
Probable additional receipts			3,000.00	8,000.00
Total receipts	$250,341.23	$281,874.47	$179,940.87	$251,342.13
Disbursements	$183,824.68	$208,947.51	$224,981.15	$251,169.19
Budget was	$223,000.00	$354,000.00	$212,000.00	$232,580.00

In the fiscal year 1929-1930, the budget was $245,680.00 and the estimated receipts were $243,000.00.

For 1930-1931, the budget was reduced to $209,240 and the assessment on mixed goods cut to 3½ cents a ton at which rate it was estimated that receipts would be $206,200.00.

The effects of the depression are reflected in the 1931-1932 budget of $69,000. The rates of assessment were cut to:

3/4 of 1¢ per ton on bagged fertilizer
3/4 of 1¢ on fertilizer materials sold by active members to fertilizer manufacturers and consumers
1/4 of 1¢ on superphosphate in bulk
1/4 of 1¢ on phosphate rock

The work of the Association was substantially confined to work that is national in scope, excluding the educational work, hitherto conducted by the Soil Improvement Committee and involved closing the branch offices hitherto operated by that Committee.

In 1932-1933, the assessment was raised to 1 cent per ton on bagged fertilizer and the budget was still further reduced to $62,010.00.

The advent of the N.I.R.A. was taken cognizance of in setting up the 1933-34 budget which amounted to $160,870.00. Of this amount $100,000.00 was budgeted for work in connection with the N.I.R.A. and the balance for regular Association Activities. In order to raise this money on the decreased fertilizer tonnage it was felt necessary to raise the assessments to the following rates:

5¢ per ton for bagged fertilizer; shipped by active members of the manufacturer and mixer class
5¢ per ton for producers and importers of fertilizer materials
2½¢ per ton on superphosphate in bulk shipped to other fertilizer manufacturers, dry mixers and consumers
1¼¢ per ton on domestic sale of phosphate rock for miners only of phosphate rock
Minimum rates for any active member $50.00 per year.
Associate Membership - - - - - $50.00 " "

The 1934-35 budget reflected the active work of Code administration and was as follows:

For regular work	$64,825.00
For Recovery work	219,929.00
For additional Zone work (Provisional)	30,000.00
	$314,754.00

Total expected income for years 1933-34:

From active members:	$189,332.24
From associate members	2,130.82
From non-member contributors	15,960.00
	$207,413.06

APPENDIX II

ADMINISTRATIVE FORMS USED IN DETERMINING PRODUCER STATUS

EXHIBIT 37

Summary of Material to be Sent to Firms Desiring to be Listed as Fertilizer Producers and to Zone Chairmen and Zone Secretaries

Has price schedule been filed?

If so give date_____ and zone_____

Administrative Order 67-3

Letter I (1) transmitting to firm:

1. Code of Fair Competition for the Fertilizer Industry.
2. Letter dated November 7, 1933, regarding the labor provisions of the Code.
3. Mimeographed sheet I (1) 3 entitled "Important Provisions of the Code," copy herewith.
4. Questionnaires 40-A, 40-B, and 40-C. Copies are sent herewith with the understanding that they are not to be duplicated in or distributed through zone offices.
5. List of zones to be checked showing where the firm does business.

Letter I (2) to Zone Chairman and Zone Secretary asking for pertinent information to be sent out at same time as Letter I (1) to firm.

Abstract of Questionnaires II (3)a - II(4)a to be sent to Zone Chairmen and Zone Secretaries.

Letter II (3)b to firm transmitting:

1. "AFFIDAVIT OF PRODUCER," II(3)b1, one form for individuals and one form for corporations or partnerships, to be used as the case may require. Copy is enclosed for your information.
2. Copy of the digest of uniform cost accounting system.
3. Application for membership in The National Fertilizer Association. Joining is wholly voluntary.

Letter II (4)a to Zone Chairmen and Zone Secretaries asking for recommendation.

Letter II (4)b to firm saying questionnaires are being acted upon.

Letter III (5)1 notifying firm that name will be entered on list and transmitting:

1. A letter III(5)1, of which copy is enclosed. notifying it that its name will be entered on the Fertilizer Industry Zone List.
2. "Regulations Covering the Filing of Open Price Schedules," with amendments.
3. Fertilizer Industry Zone List.
4. Form letter III(5)4 (copy enclosed) to National Recovery Administration for signature of firm, expressing assent to operating under the Code.

February 9, 1934.

To Zone Chairmen and Secretaries

Procedure for Handling Correspondence of Firms Desiring to Be Listed as Fertilizer Producers

Dear Sirs:

In order to expedite the handling of correspondence with firms that desire to be listed as fertilizer producers (see regulations 4, 5 and 6 of Administrative Order 67-3, copy of which is enclosed), we have adopted the following procedure:

I. WHEN THE FIRM FIRST SEEKS LISTING AS A PRODUCER:

Upon receipt of information that a firm desires to be listed as a producer, this office will:

(1) Send to the firm:

Letter I(1) (copy of which is sent you herewith) transmitting:

1. Code of Fair Competition for the Fertilizer Industry.
2. Letter dated November 7, 1933, regarding the labor provisions of the Code.
3. Mimeographed sheet I(1)3 entitled "Important Provisions of the Code," copy herewith.
4. Questionnaires 40-A, 40-B, and 40-C. Copies are sent herewith with the understanding that they are not to be duplicated in or distributed through zone offices.
5. List of zones to be checked showing where the firm does business.

(2) Send to the Zone Chairman and to the Zone Secretary a form letter I(2) (copy of which is sent you herewith), asking for pertinent information concerning the firm.

II. WHEN THE FIRM HAS SENT IN QUESTIONNAIRES 40-A, 40-B and 40-C:

Upon receipt of the questionnaires this office will proceed as follows:

(3) If is clear that the firm should be listed as a producer in the Fertilizer Industry Zone List:

a. Prepare an abstract II(3)a - II(4)a of essential material contained in the questionnaires, and send a copy to the Zone Chairman and to the Zone Secretary for their information.

b. Send to the firm a letter II(3)b, copy of which is sent you herewith, transmitting:

1. "AFFIDAVIT OF PRODUCER," II(3)b1, one form for individuals and one form for corporations or partnerships, to be used as the case may require. Copy is enclosed for your information.

2. Copy of the digest of uniform cost accounting system.

3. Application for membership in The National Fertilizer Association. Joining is wholly voluntary.

(4) If it is not clear that the firm should be listed as a producer in the Fertilizer Industry Zone List:

a. Prepare an abstract II(3)a - II(4)a of essential material contained in the questionnaires, and send a copy to the Zone Chairman and to the Zone Secretary with a request II(4)a for recommendations as to the listing of the firm.

b. Notify the firm by letter II(4)b that its questionnaires have been received and are in process of being acted upon.

c. Hold the papers in abeyance pending report of the Zone Chairman and/or the Zone Secretary.

d. When such report has been received the procedure will be:

1. In cases in which it appears that the firm should be listed, follow the procedure shown in Paragraph II(3).

2. In cases where listing is NOT to be made, send a letter, appropriate to the particular case, to the firm informing it of the decision. A copy of such letter will be sent to the Zone Chairman and to the Zone Secretary.

III. PROCEDURE WHEN AFFIDAVIT HAS BEEN RETURNED:

Upon receipt of the executed affidavit, the procedure will be:

(5) Send to the firm:

1. A letter III(5)1, of which copy is enclosed, notifying it that its name will be entered on the Fertilizer Industry Zone List.
2. "Regulations Covering the Filing of Open Price Schedules," with amendments.
3. Fertilizer Industry Zone List.
4. Form letter III(5)4 (copy enclosed) to National Recovery Administration for signature of firm, expressing assent to operating under the Code.

(6) Send a copy of letter III(5)1 to the Zone Secretary and the Zone Chairman.

(7) Take the proper steps to have the name of the firm listed in the next revision of the Fertilizer Industry Zone List.

(8) List the name of the firm in The N. F. A. News, together with the zones or sub-zones in which it does business.

Very truly yours,

CHARLES J. BRAND (signed)
Executive Secretary and Treasurer.

Enclosures:
Administrative Order 67-3
Letter I(1)
Important Provisions of the Code I(1)3
Questionnaires 40-A, 40-B, and 40-C
List of Zones
Letter I(2)
Abstract of Questionnaires II(3)a - II(4)a
Letter II(3)b
Affidavit II(3)b1
Letter II(4)a
Letter II(4)b
Letter III(5)1
Letter III(5)4

CJB:JMF

NATIONAL RECOVERY ADMINISTRATION
WASHINGTON, D. C.

Administrative Order #67-3 February 6, 1934
(3 P.M.)

1. Any wholesale cooperative association (a cooperative association of the character described in sub-division a of Section 3 of Article VII) shall have the right to purchase potash, phosphate rock, and/or nitrogen carriers from producers or importers of these materials even though such producers or importers do not file any schedule of prices to dealers and/or consumers in the areas covered by such cooperative association, provided that in all cases where such producers or importers do not file any schedule of prices to dealers and/or consumers such cooperative association shall itself issue, file, and maintain open price schedules of the character and in the manner specified in Section 2 of Article VI of the Code, and provided further that such cooperative association shall abide by all of the price provisions applicable to producers under said Article VI.

2. Any producer or importer of potash, phosphate rock or nitrogen carriers who does not sell to dealers and/or consumers may sell such products or any of them, to any wholesale cooperative association (a cooperative association of the character described in sub-division a

of Section 3 of Article VII) without thereby being deemed to be subject to any of the provisions of the Code.

3. All schedules hereafter filed in compliance with the provisions of Section 2 of Article VI of the Code must provide for the allowance of suitable quantity discounts from the prices listed in said schedules to producers, dealers, agents, and consumers as contemplated in Section 1 of Article VI.

4. The Secretary of The National Fertilizer Association, to assist producers in filing schedules with their competitors in compliance with the requirements of Section 2 of Article VI of the Code, may prepare and issue from time to time a list of the names and addresses of producers operating in each zone, or subdivision thereof, and mail a copy of such list to each producer.

5. The Secretary of The National Fertilizer Association may require from such persons who wish to be included in such list of producers an affidavit or sworn statement declaring that they are producers (within the meaning of Section 12 of Article II of the Code) together with the facts pertinent thereto, and that they agree to comply with the provisions of the Code and all regulations issued thereunder, including specifically, but without limiting the generality of the foregoing, the Labor Provisions of Article IV, the Price Provisions of Article VI, the Marketing Provisions of Article VII, the Unfair Practice Prohibitions of Article VIII, and the provisions as to Fees and Expenses of Article XI.

6. The Secretary of The National Fertilizer Association with the advice and assistance of the Farm Credit Administration may from time to time prepare and issue a list of the names and addresses of wholesale cooperative associations (cooperative associations of the character described in sub-division a of Section 3 of Article VII of the Code) operating in such zone or sub-division thereof and mail a copy of such list to each such wholesale cooperative association and to such producer operating in such zone or sub-division thereof.

WASHINGTON, D. C.

Dear Sir:

Reference is made to your letter of _____, 1934 regarding your desire to be listed as a fertilizer producer in the FERTILIZER INDUSTRY ZONE LIST.

Your attention is called to the fact that inclusion in, or exclusion from, this List does not fix a person's status - whether as producer or otherwise - in the fertilizer industry and is not so intended. The List is prepared merely for the assistance of producers in complying with the Code, and contains names of persons who are believed, from the information obtained, to be "producers" under the Code meaning of the term.

We are sending you under separate cover the following:

1. Code of Fair Competition for the Fertilizer Industry.
2. Letter dated November 7, 1933, regarding the labor provisions of the Code.
3. Mimeographed sheet entitled "Important Provisions of the Code."

It is urged that you read all of these documents very carefully. One who is a "producer" under the Code incurs certain obligations and these documents are sent to you so that you may acquaint yourself with such obligations at this time.

4. Questionnaires 40-A, 40-B, and 40-C. Questionnaire 40-A contains a number of general questions; 40-B relates to plants and facilities; 40-C has reference to sales during the year ending June 30, 1933. Instructions are attached to each questionnaire.
   Please answer every question and fill in every blank applicable to your business, with the greatest care, and return the questionnaires to us at your earliest convenience.
5. List of zones. Check each State or part of State in which you intend to do business.

Enclosures:
Copy of Code
Letter of Nov. 7
Important Provisions of the Code 1(1)3
Questionnaires 40-A, B, and C
List of Zones.
CJB:LM

Very truly yours,

Executive Director, Fertilizer Recovery Committee.

IMPORTANT PROVISIONS OF THE CODE

All producers as defined in Article II, Section 12 of the Code who sell to dealers and/or consumers come under the Code and, among other things, must observe the labor provisions (Article IV); must not sell below cost (Article IV); must file open price schedules and send copies thereof to their competitors (Article VI); must refrain from the unfair practices prohibited (Article VIII); must furnish reports and statistics as required (Article IX); and must pay to the Code Authority their appropriate share of the amount necessary for the administration of the Code (Article XI).

Anyone violating the Code in any respect is subject to the penalties provided in the National Industrial Recovery Act.

ARTICLE II - DEFINITIONS

Section 12 defines "producer" as follows:

"The term 'producer' means any member of the industry engaged in the business of preparing, mixing manufacturing, or importing mixed fertilizer, super-phosphate, and/or other fertilizer material for sale."

It is clear from a reading of this definition that "producer" status is a question of fact. The Code does not give to The National Fertilizer Association or to the Fertilizer Recovery Committee the authority to make a conclusive determination of the question as to whether any particular company is a producer. That depends on the facts in each case. The Code Authority cannot, by any mandate or finding or ruling, convert into a producer one who is not such by virtue of the facts as to the nature of his business, nor, on the other hand, can they exclude from the "producer" class any person the nature of whose business shows him to belong to such class.

ARTICLE IV - LABOR PROVISIONS.

Section 1--Collective Bargaining.

Employees have a right to organize and bargain collectively through representatives of their own choosing. No employee shall be required to join a company union. Employers must comply with the hours and wages provided in the Code.

Section 2--Maximum Hours of Labor.

With minor exception no employee shall be required or permitted to work more than 40 hours in any one week or 8 hours in any one day.

Overtime. Overtime shall be paid at the rate of one and one-third times the normal rate for all work in excess of 8 hours a day except in the case of office employees.

Section 3--Minimum Rates of Pay.

No employee shall be paid less than 35 cents an hour in the Northern area, 25 cents an hour in the Southern area, 35 cents an hour in the Midwestern area, 40 cents an hour in the Pacific Coast area, and 20 cents an hour in Puerto Rico. (See Article IV, Section 3, for description of these ares.) In case he works more than the prescribed hours he must be paid therefor at one and one-third times his rate of pay.

ARTICLE VI - PRICE PROVISIONS

Section 1--Sales Below Cost Prohibited.

It is a violation of the Code for a producer to sell goods at less than his cost except to meet existing competition. Costs must be computed in accordance with the uniform methods of accounting prescribed by the Fertilizer Recovery Committee and approved by the National Recovery Administration.

Section 2--Open Price Schedules.

Before a producer may sell his goods to dealers and/or consumers he must file an open price schedule with the Secretary of The National Fertilizer Association and simultaneously mail or deliver copies to his competitors. Schedules - except those to meet competition - do not take effect until ten days after filing.

ARTICLE VIII - UNFAIR PRACTICES PROHIBITED

There are 18 specific trade practices which are prohibited. Engaging in any of these practices constitutes a violation of the Code. It is urged that this Article be read very carefully.

ARTICLE IX - REPORTS AND STATISTICS

From time to time the Code Authority will require certain reports and statistics, which must be furnished.

ARTICLE XI - FEES AND EXPENSES

Each producer subject to the jurisdiction of the Code and accepting the benefits of the activities of the Code Authority will be required to pay his share of the cost of administration of the Code.

THE NATIONAL FERTILIZER ASSOCIATION
616 Investment Building, Washington, D. C.

QUESTIONNAIRE NO. 40-A

1. Company Name_____ Address_____

2. Is your business
   ( ) A corporation ( ) A Governmental Agency, Federal, State, Municipal
   ( ) A copartnership
   ( ) An individual enterprise ( ) Other, if any - specify:

3. Parent Company_____ Address_____
   If more than 50 per cent of the capital stock is owned by another company, insert the name and address of the parent company above.

4. Parent companies will list the names and addresses of their subsidiary companies here:

5. Check in the following list those from whom you purchase:

	Wholesalers and Jobbers	Importers	Brokers	Dry Mixers	Foreign Co's	Miners or Mfgrs.
Sulphuric Acid	( )	( )	( )	( )	( )	( )
Phosphate Rock	( )	( )	( )	( )	( )	( )
Superphosphate	( )	( )	( )	( )	( )	( )
Ammonium Phosphate	( )	( )	( )	( )	( )	( )
Nitrate of Soda	( )	( )	( )	( )	( )	( )
Sulphate of Ammonia	( )	( )	( )	( )	( )	( )
Cyanamide	( )	( )	( )	( )	( )	( )
Tankage	( )	( )	( )	( )	( )	( )
Cotton Seed Meal	( )	( )	( )	( )	( )	( )
Other Organic Mat.	( )	( )	( )	( )	( )	( )
Potash Materials	( )	( )	( )	( )	( )	( )
Mixed Fertilizer	( )	( )	( )	( )	( )	( )

6. Check in the following list those to whom you sell your fertilizer products:

( ) Consumers, direct
( ) Consumers, thru agents
( ) Retail Dealers
( ) Wholesalers and Jobbers
( ) Dry Mixers
( ) Brokers
( ) Wholesale Cooperatives
( ) Retail Cooperatives
( ) Private Brand Companies
( ) Others, as follows:

7. Are you engaged in business as:

( ) Importer
( ) Broker
( ) Manufacturer of Superphospate
( ) Manufacturer of Mixed Fertilizer
( ) Manufacturer of Nitrogen Materials
( ) Producer of Potash
( ) Manipulator of Manures
( ) Wholesaler or Jobber
( ) Private Brand Company
( ) Wholesale Cooperative
( ) Retail Dealer
( ) Retail Cooperative
( ) Other, if any - specify:

8. How long have you conducted the business above described without change either in legal organization or in the nature of the business? _____years.

On a separate sheet to be attached hereto, describe changes that have been made during the past three years, if any, in the legal organization of your business and/or in the nature of the products sold.

9. What was the sales value of the mixed fertilizers, superphosphate, and/or other fertilizer materials sold during the fiscal year ended:

June 30, 1933.....$_____
June 30, 1932..... _____
June 30, 1931..... _____

What was the amount of such sales for December 1933 _____

10. Attached is a list of zones. Check each State or part of a State, as shown by the list, in which you do or intend to do business. If you do business only in a limited area, specify on the list the particular area.

11. For what zones, if any, have you filed open price schedules as described in the Code? (Give the zone numbers and opposite each zone number give the filing date of the latest schedule only.)

12. Of the mixed fertilizer, superphosphate, and/or other fertilizer materials produced in plants owned or leased by you, how many tons did you and your tenants consume during the fiscal year ended June 30, 1933? _____tons.

13. Of the mixed fertilizer, superphosphate, and/or other fertilizer materials PURCHASED by you and SOLD as such, how many tons did you and your tenants consume during the fiscal year ended June 30, 1933?_____ tons.

14. a. Do you now own or have under lease a plant?_____
b. Have you reopened a plant formerly operated by you?_____

If so, explain fully on a separate sheet.

15. Have you, since July 1, 1933, actually mixed, manufactured, or prepared mixed fertilizer, superphosphate, and/or other fertilizer materials, for sale, in a plant owned or leased by you?_____How much?_____tons.

16. Have you, since July 1, 1933, made sales of,, or offered for sale, mixed fertilizer, superphosphate, and/or other fertilizer materials, produced in a plant owned or leased by you?_____.

17. a. How many tons of mixed fertilizer do you expect to produce during the year 1934 in plants now owned or leased by you? _____tons.

b. How many tons of such mixed fertilizer do you expect to be used by you and your tenants during the year 1934?_____tons.

c. Of the mixed fertilizer, superphosphate and/or other fertilizer materials to be PURCHASED by you during the year 1934, how many tons do you expect to be used by you and your tenants? _____tons.

Affixing of the signature hereto is a representation by the party so doing that the answers hereto given are true to the best of his knowledge.

Date_____ _____

Signature of Executive Officer, Owner, Manager, or other person actively in charge of the business and in position to answer the above questions.

INSTRUCTIONS
FOR ANSWERING QUESTIONNAIRE NO. 40-A

These Instructions refer by number to the questions.

1. Give full company name and address.

2. Give the legal form of organization of your business.

3. Give the name and address of the company, if any, owning more than 50 per cent of the capital stock of your company.

4. Each parent company will name its subsidiaries and give the proper addresses thereof.

5. Check in this list the types of companies from which purchases are made.

6. Check in this list the channels through which your sales of mixed fertilizers, superphosphate, and/or other fertilizer materials are made.

7. Check in this list all of the terms which characterize or describe your business or any part of it.

8. Give the number of years your company has conducted its business without change in the type of legal organization (corporation, co-partnership, individual enterprise, etc.), or in the products sold (mixed fertilizer, superphosphate, and/or other fertilizer materials). Describe changes, if any, as indicated by the question.

9. Self explanatory.

10. In checking the list of zones it is especially important that you check each State, or part of a State, as shown in the list, in which you do or intend to do business.

11 to 17, inclusive. Self explanatory.

THE NATIONAL FERTILIZER ASSOCIATION
616 Investment Building, Washington, D.C.

QUESTIONNAIRE NO. 40-B RELATING TO PLANTS AND FACILITIES

Note: A separate questionnaire is to be filled in each plant

1. Name of Company_____ Number and Street_____ City and State_____

2. Name of person in charge of plant_____

3. Date of acquisition of plant, if owned_____
Date of lease, if leased_____ and period of lease_____
Date of building or construction of plant_____

4. On a separate sheet to be attached, describe the facilities of this plant.

5. Daily capacity when in full operation at eight hours a day_____ tons.

6. Tons produced during the past two years:
a. July 1, 1932, to June 30, 1933_____ tons.
b. July 1, 1931, to June 30, 1932_____ tons.

7. What is the fair value of the plant:
a. Land $_____ c. Machinery $_____
b. Building $_____ d. Total $_____

8. Is the plant described in this questionnaire:
a. Dry mixing_____ b. Acidulating_____ c. Complete_____
b. Fertilizer Materials plant_____.
(Before answering this question read the Instructions very carefully).

9. Give the location of each sales office. (See Instructions for description of sales office.)

_____

_____

10. a. What were the principal products (materials and mixed goods) produced in the above plant during the past two years?

_____

_____

b. If the plant was not in operation during the past season, then state the products which it is proposed to produce:

_____

_____

11. Is any department of your plant not to be operated, according to present intentions, during the 1934 season?_____. If so explain

_____

Affixing of the signature hereto is a representation by the party so doing that the answers hereto given are true to the best of his knowledge.

Date_____ _____L.S.

THE NATIONAL FERTILIZER ASSOCIATION
616 Investment Building, Washington, D.C.

INSTRUCTIONS
FOR ANSWERING QUESTIONNAIRE NO. 40-B

These Instructions refer by number to the questions.

A separate questionnare (Form No. 40-B) is to be filled in for each separate plant. See definition of types of plants in 8 below.

1. Self explanatory.

2. Self explanatory.

3. Self explanatory.

4. Facilities include: (a) the plot of land; (b) size and construction of the building; (c) type and style of: dry mixing machinery; acidulating machinery; sulphuric acid equipment; (d) railway sidings; (e) capacity of warehouse; and (f) other pertinent information.

5. Self explanatory.

6. Self explanatory.

7. Self explanatory.

8. a. A "Dry mixing plant" is a plant having equipment suitable for mixing fertilizer.
   b. An "acidulating plant" is a plant in which superphosphate is produced by mixing sulphuric acid and phosphate rock.
   c. A "complete plant" is a Plant having acid chambers for producing sulphuric acid, acidulating equipment for producing superphosphate, and mixing equipment for producing complete fertilizer.

d. If you produce any fertilizer material either as a principal product or as a by-product of some other industry, so indicate by naming the product or products. Examples: Cottonseed meal, fish scrap, animal tankage, bonemeal, nitrogenous tankage, garbage tankage, sewage sludge.

9. Give the address of each sales office which meets the following requirements:

a. Is designated by the company as a sales office.
b. Is the office of a sales manager, district sales manager, or other person filling the same general functions.
c. Is an office where sales are made.
d. Is not merely an office where a local or traveling salesman is located, even though he spends all or part of his time in making sales.
e. Is not a retail store owned by the herein named company or firm.

10. Name the principal products as "Mixed Goods"; "Superphosphate"; other types of materials, if any.

11. Give as the name of the "department" (a) Mixed Goods; (b) Superphosphate; (c) Sulphuric Acid; (d) Phosphate Rock Grinding; or other, as the case may be.

QUESTIONNAIRE NO. 40-C Code Number_____

THE NATIONAL FERTILIZER ASSOCIATION
616 Investment Building
Washington, D. C.

Note: Please read the instructions carefully before gathering the data or attempting to fill in this form.

Section 1. I SOLD DURING THE FISCAL YEAR ENDED JUNE 30, 1933:
(Not including Exchanges and Transfers)

	Tons Sold		
	Bagged	Bulk	TOTAL
Mixed Goods			
Superphosphate			
Sulphate of Ammonia			
Nitrate of Soda			
Potash Materials			
Natural Organic Materials			
Other Fertilizer Materials			
TOTAL TONS SOLD			

Section 2. OF THE QUANTITY SO SOLD, I PURCHASED FROM OTHERS THE FOLLOWING:

Mixed Goods			
Superphosphate			
Sulphate of Ammonia			

Nitrate of Soda			
Potash Materials			
Natural Organic Materials			
Other Fertilizer Materials			
TOTAL			

Section 3. OF THE QUANTITY SO SOLD, I MANUFACTURED IN PLANTS OWNED OR LEASED BY ME (OR FIRM) THE FOLLOWING:

Mixed Goods			
Superphosphate			
Sulphate of Ammonia			
Nitrate of Soda			
Potash Materials			
Natural Organic Materials			
Other Fertilizer Materials			
TOTAL			

Section 4. IF ANY GOODS SO SOLD WERE IMPORTED BY YOUR COMPANY IN ITS OWN NAME (AND NOT THROUGH ANOTHER) STATE THE NUMBER OF TONS OF:

Potash Materials			
Nitrate of Soda			
Sulphate of Ammonia			
Others(naming(them(			
TOTAL			

INSTRUCTIONS
FOR ANSWERING QUESTIONNAIRE NO. 40-C

The Instructions refer by number to the sections.

This questionnaire covers sales made during the year ended June 30, 1933.

It is necessary to know whether the sales were made from goods purchased from others or from goods produced in plants owned or leased by the company.

1. The total sales of fertilizer and/or fertilizer materials should be shown here. The tonnage shown in this section for any item should equal the combined tonnage shown in Sections 2 and 3 for the same item.

2. In this section, under the proper headings, should be entered all sales of goods which were not produced in plants owned or leased by your company, but which were purchased from others.

For example, if your company bought bulk mixed goods and bagged and sold the same, the tonnage should be entered as "Mixed Goods," "Bagged." Mixed Goods to be entered in this section include all mixed goods purchased from others and resold, except those to which additional materials were added and mixed.

If your company purchased superphosphate, any amount of such material sold, except in mixed goods, should be entered as "Superphosphate," "Bagged" or "Bulk," as the case may be. The same procedure should be followed with regard to sulphate of ammonia and other materials.

3. Goods manufactured or produced in factories owned or leased by your company or mined by your company and sold should be shown here. Materials purchased by your company, used in the manufacture of mixed goods, and sold by your company in mixed goods should appear as "Mixed Goods" and not as materials. Unless nitrogen and potash materials are

actually produced by your company, sales of such materials should not be entered in this section, but in Section 2.

DESCRIPTION OF GOODS

In order that there may be uniformity as to the classification of fertilizers and fertilizer materials, the following descriptions are given:

Mixed Goods Include:

Mixtures containing at least two plant foods, such as phosphoric acid and nitrogen, or phosphoric acid and potash. It would, of course, include mixtures of three plant foods (nitrogen, phosphoric acid, and potash).

Superphosphate: Self-explanatory
Sulphate of Ammonia: " "
Nitrate of Soda: " "

Potash Materials Include:

Muriate of Potash
Sulphate of Potash
Sulphate of Potash Magnesia
Kainit
Manure Salts
Nitrate of Potash

Natural Organic Materials Include:

Cottonseed Meal
Sewage Sludge
Tankage
Dried Blood
Fish Scrap
Guano
Castor Pomace
Manipulated Manures
Other materials of plant or animal origin

Other Fertilizer Materials Include:

Bone Meal
Phosphate Rock
Basic Slag
Ammonium Phosphate
Calcium Cyanamide
Urea and Calurea
Any others not already listed

FERTILIZER RECOVERY COMMITTEE (CODE AUTHORITY)
616 Investment Building
Washington, D. C. FORM 50

SALES TERRITORY SHEET
(Please check those States in which you are doing or expect to do business)

Name of Reporting Company_____ Address_____

Zone No. 1*
Maine
New Hampshire
Vermont
Massachusetts
Rhode Island
Connecticut

Zone No. 2*
New York
Pennsylvania
New Jersey
Puerto Rico
West Virginia (Panhandle Section - comprising Hancock, Brooke, Ohio, and Marshall Counties)

Zone No. 3*
Maryland
Delaware
District of Columbia
Virginia north of James River, including Accomac and Northampton Counties
West Virginia (B.&O. Section - comprising the following counties and, with the exception of the Panhandle Section, counties north thereof: Mason, Jackson, Braxton, Webster, Pendleton, Roane, Calhoun, Randolph, Nicholas (that part served by the B. & O. RR.)

Zone No. 4*
Virginia south of James River, including Richmond
West Virginia (C. & O. Section)
North Carolina

Zone No. 5*
South Carolina

Zone No. 6*
Georgia
Florida, starting with the eastern boundaries of Columbia, Suwanee, Lafayette, and Taylor Counties and extending west to the Apalachicola River

Zone No. 7*
Florida east and south of Suwanee, Columbia, Lafayette, and Taylor Counties

Zone No. 8*
Tennessee Alabama Mississippi
Florida west of the Apalachicola River
Louisiana east of the Mississippi River.

Zone No. 9*
Arkansas Texas
Oklahoma New Mexico
Louisiana west of the Mississippi

Zone No. 10*
Michigan Missouri
Ohio North Dakota
Indiana South Dakota
Kentucky Nebraska
Illinois Kansas
Wisconsin Montana
Minnesota Wyoming
Iowa Colorado

Zone No. 11*
Washington Oregon
Idaho

Zone No 12*
California Nevada
Utah Arizona
Hawaii

* Indicate on the blank line provided for each zone the address to which you wish open price schedules for that zone to be sent.

Return to:
Fertilizer Recovery Committee
The National Fertilizer Association
616 Investment Building
Washington, D. C.

WASHINGTON, D.C.

Letter I(2)

To the Chairman and the Secretary of Zone _____

Dear Sirs:

_____ wishes to be listed as a producer in the FERTILIZER INDUSTRY ZONE LIST. We have sent him our form letter NO. I(1), copy of which has been furnished you.

Will you please supply us with any information you may have regarding this firm, with particular reference to its producer status.

Very truly yours,

Executive Director, Fertilizer Recovery Committee

CJB:LM

II(3)a
II(4)a

FERTILIZER RECOVERY COMMITTEE (CODE AUTHORITY)
616 Investment Building, Washington, D. C.

ABSTRACTS OF QUESTIONNAIRES 40-A, B, AND C

1. Company Name _____

   Address _____

2. Propose to do business in Zones _____

3. Location (if not as above) _____

   Person in Charge _____

4. Business: _____

5. Plant: _____

6. Sales: _____

7. Price Schedule Filed: _____

8. Special Information: _____

Copy to Chairman and Secretary of Zone _____

9761

WASHINGTON, D. C.

Letter II(3)b

Dear Sirs:

Regarding your Questionnaires 40-A, 40-B, and 40-C, it appears from a preliminary examination of all of the information which we have obtained that you should be listed in the FERTILIZER INDUSTRY ZONE LIST. In order to determine this finally, we are sending you:

1. "Affidavit of Producer." One form for individuals and one form for corporation or partnership are enclosed. If you are a producer under the Code meaning of that term, and will execute the appropriate form and return it to me, it will become a part of your application to be listed as a producer in the FERTILIZER INDUSTRY ZONE LIST.

We are also sending you:

2. Digest of Uniform System of Cost Accounting approved by the Code Authority and the National Recovery Administration. Your attention is again directed to the fact that costs under Article VI, Section 1, must be computed in accordance with the uniform methods of accounting prescribed by the Fertilizer Recovery Committee and the National Recovery Administration.

3. Application for membership in The National Fertilizer Association. We are glad to have all producers as members of our Association. In case you fill out and return the Affidavit, we shall be very glad also to have you fill out and return to us the application for membership. Such action on your part is wholly voluntary.

4. If membership is desired and an appl cation is sent in, you should also fill in and return the tonnage report blank. This report will be used for computing dues to the Association if you become a member. A rate of dues memorandum is also enclosed for your information.

Very truly yours,

Sep. Cover:
Affidavit of Producer
Digest of Uniform System of Cost Accounting
Membership Application
Tonnage Report Blank
Rate of Dues Memo.

Executive Director
Fertilizer Recovery Committee

CJB:LM

9761

II(3)b 1

AFFIDAVIT OF PRODUCER
(Individual)

State of _____)
) SS
County of _____)

_____, being duly sworn, says that he is engaged bona fide in the business of _____
(Preparing, mixing, manufacturing,
_____
(or importing mixed fertilizer, superphosphate, and/or other fertilizer
_____ _____ for sale, within the meaning of
(material by name)
Section 12, Article II, Code of Fair Competition for the Fertilizer Industry, approved October 31, 1933, under the National Industrial Recovery Act; that his _____
(plant, or principal place of business if an importer)
is located at _____ _____
(town or city and State)
that further facts regarding his business are as set forth in Questionnaires 40-A, 40-B, 40-C now or heretofore filed with the Secretary of The National Fertilizer Association; and that he does hereby agree to accept and comply with all of the provisions of said Code applicable to such producers, including Article IV, Labor Provisions; Article VI, Price Provisions; Article VIII, Unfair Practices Provisions; Article IX, Reports and Statistics Provisions; and Article XI, Fees and Expenses Provisions, together with any regulations issued or to be issued thereunder.

_____
(Name of person signing)

_____
(Street)

_____
(City or town)

_____
(State)

Subscribed and sworn to before me
this _____day of _____, 1934

_____
Notary Public

II(3)b 1

AFFIDAVIT OF PRODUCER
(Corporation or Partnership)

The undersigned hereby certifies that it is a _____ (corporation bona fide engaged in the business of _____ (partnership) (preparing, (mixing, manufacturing, or importing mixed fertilizer, superphosphate, _____ for sale within the (and/or other fertilizer material by name) meaning of Section 12, Article II, Code of Fair Competition for the Fertilizer Industry, approved October 31, 1933, under the National Industrial Recovery Act; that its _____ (plant, or principal place of business if an importer) is located at _____ (town or city and State); that further facts regarding its business are as set forth in Questionnaires 40-A, 40-B, and 40-C now or heretofore filed with the Secretary of The National Fertilizer Association; and that it does hereby agree to accept and comply with all of the provisions of said Code applicable to such producers, including Article IV, Labor Provisions; Article VI, Price Provisions; Article VIII, Unfair Practices Provisions; Article IX, Reports and Statistics Provisions; and Article XI, Fees and Expenses Provisions, together with any regulations issued or to be issued thereunder.

_____ _____
(Name of corporation or partnership)

By_____
(Name of person signing)

_____
(Title of person signing)

(Note. If corporation, add signature of Secretary and corporate seal.)

State of _____ County of _____
_____, being duly sworn says that he is _____ (Title of _____ (person signing) of _____ _____ (Name of corporation or partnership) above named; that as such he is authorized to execute the foregoing document, and that the statements made therein as facts are true to the best of his knowledge, information, and belief.

Subscribed and sworn to before me _____ _____
this _____day of _____, 1934.

_____
Notary Public

THE NATIONAL FERTILIZER ASSOCIATION
Rates of Dues
Fiscal Year 1933-1934

Active Members

a. Minimum rate, $25.00 a year for other than Specialty Producers; $15.00 a year for Specialty Producers.

b. 5 cents a ton for bagged fertilizer sold and/or consigned and shipped by active members of the manufacturer and mixer class.

c. 5 cents a ton for producers and importers of fertilizer materials, except:

d. 2½ cents a ton on kainit; peat, humus, sewage sludge, garbage tankage, and similar organic material of low value.

e. 2½ cents a ton on superphosphate in bulk shipped to other fertilizer manufacturers (excluding exchanges), dry mixers, and consumers.

f. 1½ cents a ton on domestic sale of phosphate rock for miners only of phosphate rock.

Associate members

g. $50.00 a year.

- - - - - - -

"Bagged fertilizer" means all bagged goods, whether containing nitrogen, phosphoric acid, and potash; or nitrogen and phosphoric acid; or phosphoric acid and potash; or superphosphate only if sold in bags.

Active members engaged in the manufacture and mixing of fertilizer pay nothing on kainit or other forms of potash, nitrate of soda, cottonseed meal, tankage, blood, bone, fish, castor pomace, sulphate of ammonia, cyanamide, et cetera, when sold as such in an unmixed state.

Active members who are producers or importers of fertilizer materials pay dues on the materials specified in the preceding paragraph when sold and/or consigned and shipped by them to fertilizer manufacturers, dry mixers, and consumers.

Active membership dues for the current fiscal year are computed on the tonnage of the preceding fiscal year ended June 30. These dues are payable in equal quarterly installments, the first payment being due on August 1. Subsequent installments are due and payable on the first day of each quarter beginning October 1.

Members who join during a fiscal year pay dues for the remaining quarters including the quarter in which their name is added to the membership list. Dues are computed for the entire fiscal year, and 1/4, 2/4, 3/4, or 4/4 of that amount is payable according to the quarters remaining in the fiscal year at the time of inclusion on our membership list.

WASHINGTON, D. C.

Letter II(4)a

To the Chairman and Secretary of Zone

Dear Sirs:

Attached hereto is an Abstract of Questionnaires 40-A, 40-B, and 40-C, regarding _____.

We do not feel from the information in our possession that this firm should be listed as a producer in the Fertilizer Industry Zone List. We would appreciate it if you would send us your recommendation at once, together with the statement of the facts upon which it is based.

Very truly yours,

Executive Director
Fertilizer Recovery Committee

CJB:LM

WASHINGTON, D. C.

Letter II(4)b

Dear Sir:

Receipt is acknowledged of your Questionnaires 40-A, 40-B, and 40-C. They are now being examined and in due time we will report to you the result of our examination.

Very truly yours,

Executive Director
Fertilizer Recovery Committee

CJB:LM

9761

WASHINGTON, D. C.

Letter III(5)1

Dear Sir:

Receipt is hereby acknowledged of your executed "Affidavit of Producer." It is my present intention to have your name entered in the next revision of the FERTILIZER INDUSTRY ZONE LIST as a producer selling to dealers, agents, and/or consumers. However, as already indicated, inclusion in, or exclusion from, this List does not fix a person's status--whether as producer or otherwise--in the fertilizer industry, and is not so intended. The List is prepared merely for the assistance of producers in complying with the Code, and contains names of persons who are believed, from the information obtained, to be "producers" under the Code meaning of the term.

We are sending you the following:

1. "Regulations Covering the Filing of Open Price Schedules," dated February 21, 1934, superseding the issue of December 28, 1933.

2. Copy of the FERTILIZER INDUSTRY ZONE LIST. In mailing copies of your schedules to your competitors you should send copies not only to those firms listed in this book but also to any other firms which you may know to be producers in the zone or zones in which you are doing business.

3. A form letter to Major George L. Berry, Deputy Administrator, National Recovery Administration, which is enclosed for your convenience as an open expression of your assent to operate under the Code. I shall be glad if you will sign this letter and return it to me. This is not compulsory, but failure of any producer to sign the letter does not operate to relieve him of responsibility for observing the provisions of the Code.

It is fitting that I should now, on behalf of the Fertilizer Recovery Committee, solicit your full cooperation in the administration of the Code.

Very truly yours,

CJB:LM
Sep. Cov.:
Regulations Covering
Filing of Open Price
Schedules,
Fertilizer Industry
Zone List,
Letter to Major Berry

Executive Director
Fertilizer Recovery Committee

9761

III(5) 4

NOTICE OF ACCEPTANCE
of the
CODE OF FAIR COMPETITION FOR THE FERTILIZER INDUSTRY

_____
(Date)

Major George L. Berry
Deputy Administrator
National Recovery Administration
Washington, D. C.

You are hereby advised that this company wishes to be enrolled as accepting the Code of Fair Competition for the Fertilizer Industry as approved on October 31, 1933, by President Franklin Delano Roosevelt under authority of the National Industrial Recovery Act.

We are taking this action in order to do our part in placing, as nearly as may be possible, all in the industry on an equally fair competitive basis.

_____
(Name of Company)

_____
(Signed by)

_____
(Address)

EXHIBIT 38

THE FERTILIZER STUDY

ORGANIZATION CHART

UNIT CHIEF
AL F. O'DONNELL

Secretary
MARY MARTIN

PRODUCTION & FINANCE	LABOR	FOREIGN TRADE	INDUSTRY & GOVERNMENT	PRICE & DISTRIBUTION
Project Head D. A. TUTEIN	Project Head M. L. BUCK	Project Head F. J. PATCHELL	Project Head C. E. WILLIS	Project Head C. D. DOHANIAN
Accounting Adviser Harvey Wells	Labor Adviser Tom Hunter	Project Assistant C. R. Johnson	Project Assistant W. T. Davis	Project Assistant Dr. J. P. Riggleman
	Statistical Adviser Alvin Mayne	Foreign Trade Adviser J. G. Burke	Legal Adviser J. E. O'Brien	Aide J. P. McCarty
Secretary Gertrude Wright		Secretary Alva Haas		Secretary Elizabeth Lipscomb

Tyoist
Margaret Sartwell

APPENDIX II

EXHIBIT 38

The organization chart shows the personnel which was actively engaged at any time on the study of the fertilizer industry. Most of the personnel had reported for duty August 22, 1935. By November 15, 1935 the subordinate personnel with the exception of three stenographers had been separated from the study. The various key personnel were separated from the study as follows:

Mr. L. A. Ehrlein	November 15, 1935
Mr. W. J. Patchell	December 31, 1935
Mr. W. L. Buck	December 31, 1935
Mr. C. F. Bohannan	February 7, 1936
Mr. C. T. Willis	February 7, 1936

Mr. Al T. O'Donnell, Unit Chief of the study was left with one stenographer to prepare the final report for publication.

APPENDIX II

EXHIBIT 38

FERTILIZER STUDY

PERSONNEL DATA

UNIT CHIEF
A. F. O'Donnell

Chemical Engineering education at Massachusetts Institute of Technology was followed by several years of industrial engineering experience and then by three years of graduate work in Economics and Business Administration taken at the Harvard Graduate School of Business Administration, University of California and the University of Chicago, respectively.

Two years of teaching economics, one at the University of Chicago and the second as Professor of Engineering Economics at Iowa State College (1923-1924) were followed by ten years continuously engaged in directing economic research as to the current and prospective status of industries and companies for investment purposes, but principally for the purpose of public financing. From November, 1934 to the Schechter Decision Mr. O'Donnell was an Economist with the Research and Planning Division of the N.R.A. and advised on all of the Chemical Industry Codes including that of the Fertilizer Industry.

FOREIGN TRADE
PROJECT HEAD

F. J. PATCHELL was Assistant Deputy Administrator in the Chemical Section when the Fertilizer Code was first presented in July 1933, and sat in the pre-hearing conferences and some of the post-hearing conferences until the Code was approved. After this his time was devoted to other chemical codes until October, 1934, when he was Administration Member in New York on the Non-Metallic Section Codes of the Basic Materials Division. He has had an engineering training at Columbia University; his business experience since 1916 has been in the market research and sales end of technical products, about half of which was in foreign trade. From 1925 to 1928 he introduced concentrated fertilizer in Latin American markets for the American Cyanamid Company.

DISTRIBUTION AND PRICES
PROJECT HEAD

CHARLES D. BOHANNAN has had some twenty years of responsible college teaching, research and administrative work in Agricultural Colleges and Experiment Stations, and in government organizations. From October 1929 to July, 1933, he was the economist in charge of the section of the first Census of Distribution devoted to the Distribution of Agricultural Commodities, which included farm supplies such as fertilizer. Mr. Bohannan came with N.R.A. in December, 1933, and just prior to working on the fertilizer study was Assistant Deputy Administrator in the Food Division.

PRODUCTION AND FINANCE
PROJECT HEAD

DEXTER A. TUTEIN, a graduate of Massachusetts Institute of Technology School of Chemical Engineering Practice, after ten years as vice-president of a concern interested in management merchandizing and importing of pig iron, coal, coke and by-products (including fertilizer products) spent five years in the buying department of a large investment banking house. He had been with N.R.A. about a year and a half, at first on the Industrial Advisory Board and later as Deputy Administrator with the Equipment Division prior to joining the Staff of the fertilizer Study.

LABOR
PROJECT HEAD

MYRON L. BUCK was full time Administration Member in charge of the N.R.A. Cleveland Office and has had wide experience in the administration of codes under N.R.A. both in Washington and in the field. His industrial experience as an executive was mainly obtained in the automotive field with such concerns as Dodge Brothers and Oakland Motor Car Company.

INDUSTRY COOPERATION AND GOVERNMENT RELATIONS
PROJECT HEAD

C. E. WILLIS came with N.R.A. shortly after its organization, after being employed for twenty years by the RCA-Victor Company and its predecessors in various capacities having to do with the sales of products of that company. His work in N.R.A. as Assistant Deputy Administrator and as Acting Deputy Administrator consisted in the preparation for approval of approximately forty codes and in the active administration of an even greater number. Just prior to joining the fertilizer study he was engaged in writing Code Histories.

OFFICE OF THE NATIONAL RECOVERY ADMINISTRATION
THE DIVISION OF REVIEW

THE WORK OF THE DIVISION OF REVIEW

Executive Order No. 7075, dated June 15, 1935, established the Division of Review of the National Recovery Administration. The pertinent part of the Executive Order reads thus:

> The Division of Review shall assemble, analyze, and report upon the statistical information and records of experience of the operations of the various trades and industries heretofore subject to codes of fair competition, shall study the effects of such codes upon trade, industrial and labor conditions in general, and other related matters, shall make available for the protection and promotion of the public interest an adequate review of the effects of the Administration of Title I of the National Industrial Recovery Act, and the principles and policies put into effect thereunder, and shall otherwise aid the President in carrying out his functions under the said Title. I hereby appoint Leon C. Marshall, Director of the Division of Review.

The study sections set up in the Division of Review covered these areas: industry studies, foreign trade studies, labor studies, trade practice studies, statistical studies, legal studies, administration studies, miscellaneous studies, and the writing of code histories. The materials which were produced by these sections are indicated below.

Except for the Code Histories, all items mentioned below are scheduled to be in mimeographed form by April 1, 1936.

THE CODE HISTORIES

The Code Histories are documented accounts of the formation and administration of the codes. They contain the definition of the industry and the principal products thereof; the classes of members in the industry; the history of code formation including an account of the sponsoring organizations, the conferences, negotiations and hearings which were held, and the activities in connection with obtaining approval of the code; the history of the administration of the code, covering the organization and operation of the code authority. the difficulties encountered in administration, the extent of compliance or non-compliance, and the general success or lack of success of the code, and an analysis of the operation of code provisions dealing with wages, hours, trade practices, and other provisions. These and other matters are canvassed not only in terms of the materials to be found in the files, but also in terms of the experiences of the deputies and others concerned with code formation and administration.

The Code Histories, (including histories of certain NRA units or agencies) are not mimeographed. They are to be turned over to the Department of Commerce in typewritten form. All told, approximately eight hundred and fifty (850) histories will be completed. This number includes all of the approved codes and some of the unapproved codes. (In Work Materials No 18, Contents of Code Histories, will be found the outline which governed the preparation of Code Histories.)

(In the case of all approved codes and also in the case of some codes not carried to final approval, there are in NRA files further materials on industries. Particularly worthy of mention are the Volumes I, II and III which constitute the material officially submitted to the President in support of the recommendation for approval of each code. These volumes

set forth the origination of the code, the sponsoring group, the evidence advanced to support the proposal, the report of the Division of Research and Planning on the industry, the recommendations of the various Advisory Boards, certain types of official correspondence, the transcript of the formal hearing, and other pertinent matter. There is also much official information relating to amendments, interpretations, exemptions, and other rulings. The materials mentioned in this paragraph were of course not a part of the work of the Division of Review.)

THE WORK MATERIALS SERIES

In the work of the Division of Review a considerable number of studies and compilations of data (other than those noted below in the Evidence Studies Series and the Statistical Material Series) have been made. These are listed below, grouped according to the character of the material. (In Work Materials No. 17, Tentative Outlines and Summaries of Studies in Process, these materials are fully described).

Industry Studies

Automobile Industry, An Economic Survey of
Bituminous Coal Industry under Free Competition and Code Regulation, Economic Survey of
Electrical Manufacturing Industry, The
Fertilizer Industry, The
Fishery Industry and the Fishery Codes
Fishermen and Fishing Craft, Earnings of
Foreign Trade under the National Industrial Recovery Act
  Part A - Competitive Position of the United States in International Trade 1927-29 through 1934.
  Part B - Section 3 (e) of NIRA and its administration.
  Part C - Imports and Importing under NRA Codes.
  Part D - Exports and Exporting under NRA Codes.
Forest Products Industries, Foreign Trade Study of the
Iron and Steel Industry, The
Knitting Industries, The
Leather and Shoe Industries, The
Lumber and Timber Products Industry, Economic Problems of the
Men's Clothing Industry, The
Millinery Industry, The
Motion Picture Industry, The
Migration of Industry, The: The Shift of Twenty-Five Needle Trades From New York State, 1926 to 1934
National Labor Income by Months, 1929-35
Paper Industry, The
Production, Prices, Employment and Payrolls in Industry, Agriculture and Railway Transportation, January 1923, to date
Retail Trades Study, The
Rubber Industry Study, The
Textile Industry in the United Kingdom, France, Germany, Italy, and Japan
Textile Yarns and Fabrics
Tobacco Industry, The
Wholesale Trades Study, The
Women's Neckwear and Scarf Industry, Financial and Labor Data on

Women's Apparel Industry, Some Aspects of the

Trade Practice Studies

Commodities, Information Concerning: A Study of NRA and Related Experiences in Control
Distribution, Manufacturers' Control of: Trade Practice Provisions in Selected NRA Codes
Distributive Relations in the Asbestos Industry
Design Piracy: The Problem and Its Treatment Under NRA Codes
Electrical Mfg. Industry: Price Filing Study
Fertilizer Industry: Price Filing Study
Geographical Price Relations Under Codes of Fair Competition, Control of
Minimum Price Regulation Under Codes of Fair Competition
Multiple Basing Point System in the Lime Industry: Operation of the
Price Control in the Coffee Industry
Price Filing Under NRA Codes
Production Control in the Ice Industry
Production Control, Case Studies in
Resale Price Maintenance Legislation in the United States
Retail Price Cutting, Restriction of, with special Emphasis on The Drug Industry.
Trade Practice Rules of The Federal Trade Commission (1914-1936): A classification for comparison with Trade Practice Provisions of NRA Codes.

Labor Studies

Cap and Cloth Hat Industry, Commission Report on Wage Differentials in
Earnings in Selected Manufacturing Industries, by States, 1933-35
Employment, Payrolls, Hours, and Wages in 115 Selected Code Industries 1933-35
Fur Manufacturing, Commission Report on Wages and Hours in
Hours and Wages in American Industry
Labor Program Under the National Industrial Recovery Act, The
Part A. Introduction
Part B. Control of Hours and Reemployment
Part C. Control of Wages
Part D. Control of Other Conditions of Employment
Part E. Section 7(a) of the Recovery Act
Materials in the Field of Industrial Relations
PRA Census of Employment, June, October, 1933
Puerto Rico Needlework, Homeworkers Survey

Administrative Studies

Administrative and Legal Aspects of Stays, Exemptions and Exceptions, Code Amendments, Conditional Orders of Approval
Administrative Interpretations of NRA Codes
Administrative Law and Procedure under the NIRA
Agreements Under Sections 4(a) and 7(b) of the NIRA
Approve Codes in Industry Groups, Classification of
Basic Code, the -- (Administrative Order X-61)
Code Authorities and Their Part in the Administration of the NIRA
Part A. Introduction
Part B. Nature, Composition and Organization of Code Authorities

Part C. Activities of the Code Authorities
Part D. Code Authority Finances
Part E. Summary and Evaluation
Code Compliance Activities of the NRA
Code Making Program of the NRA in the Territories, The
Code Provisions and Related Subjects, Policy Statements Concerning
Content of NIRA Administrative Legislation
Part A. Executive and Administrative Orders
Part B. Labor Provisions in the Codes
Part C. Trade Practice Provisions in the Codes
Part D. Administrative Provisions in the Codes
Part E. Agreements under Sections 4(a) and 7(b)
Part F. A Type Case: The Cotton Textile Code
Labels Under NRA, A Study of
Model Code and Model Provisions for Codes, Development of
National Recovery Administration, The: A Review of its Organization and Activities
NRA Insignia
President's Reemployment Agreement, The
President's Reemployment Agreement, Substitutions in Connection with the
Prison Labor Problem under NRA and the Prison Compact, The
Problems of Administration in the Overlapping of Code Definitions of Industries and Trades, Multiple Code Coverage, Classifying Individual Members of Industries and Trades
Relationship of NRA to Government Contracts and Contracts Involving the Use of Government Funds
Relationship of NRA with States and Municipalities
Sheltered Workshops Under NRA
Uncodified Industries: A Study of Factors Limiting the Code Making Program

Legal Studies

Anti-Trust Laws and Unfair Competition
Collective Bargaining Agreements, the Right of Individual Employees to Enforce
Commerce Clause, Federal Regulation of the Employer-Employee Relationship Under the
Delegation of Power, Certain Phases of the Principle of, with Reference to Federal Industrial Regulatory Legislation
Enforcement, Extra-Judicial Methods of
Federal Regulation through the Joint Employment of the Power of Taxation and the Spending Power
Government Contract Provisions as a Means of Establishing Proper Economic Standards, Legal Memorandum on Possibility of
Industrial Relations in Australia, Regulation of
Intrastate Activities Which so Affect Interstate Commerce as to Bring them Under the Commerce Clause, Cases on
Legislative Possibilities of the State Constitutions
Post Office and Post Road Power -- Can it be Used as a Means of Federal Industrial Regulation?
State Recovery Legislation in Aid of Federal Recovery Legislation History and Analysis
Tariff Rates to Secure Proper Standards of Wages and Hours, the Possibility of Variation in
Trade Practices and the Anti-Trust Laws
Treaty Making Power of the United States
War Power, Can it be Used as a Means of Federal Regulation of Child Labor?

THE EVIDENCE STUDIES SERIES

The Evidence Studies were originally undertaken to gather material for pending court cases. After the Schechter decision the project was continued in order to assemble data for use in connection with the studies of the Division of Review. The data are particularly concerned with the nature, size and operations of the industry; and with the relation of the industry to interstate commerce. The industries covered by the Evidence Studies account for more than one-half of the total number of workers under codes. The list of those studies follows:

Automobile Manufacturing Industry
Automotive Parts and Equipment Industry
Baking Industry
Boot and Shoe Manufacturing Industry
Bottled Soft Drink Industry
Builders' Supplies Industry
Canning Industry
Chemical Manufacturing Industry
Cigar Manufacturing Industry
Coat and Suit Industry
Construction Industry
Cotton Garment Industry
Dress Manufacturing Industry
Electrical Contracting Industry
Electrical Manufacturing Industry
Fabricated Metal Products Mfg. and Metal Finishing and Metal Coating Industry
Fishery Industry
Furniture Manufacturing Industry
General Contractors Industry
Graphic Arts Industry
Gray Iron Foundry Industry
Hosiery Industry
Infant's and Children's Wear Industry
Iron and Steel Industry
Leather Industry
Lumber and Timber Products Industry
Mason Contractors Industry
Men's Clothing Industry
Motion Picture Industry
Motor Vehicle Retailing Trade
Needlework Industry of Puerto Rico
Painting and Paperhanging Industry
Photo Engraving Industry
Plumbing Contracting Industry
Retail Lumber Industry
Retail Trade Industry
Retail Tire and Battery Trade Industry
Rubber Manufacturing Industry
Rubber Tire Manufacturing Industry
Shipbuilding Industry
Silk Textile Industry
Structural Clay Products Industry
Throwing Industry
Trucking Industry
Waste Materials Industry
Wholesale and Retail Food Industry
Wholesale Fresh Fruit and Vegetable Industry
Wool Textile Industry

THE STATISTICAL MATERIALS SERIES

This series is supplementary to the Evidence Studies Series. The reports include data on establishments, firms, employment, Payrolls, wages, hours, production capacities, shipments, sales, consumption, stocks, prices, material costs, failures, exports and imports. They also include notes on the principal qualifications that should be observed in using the data, the technical methods employed, and the applicability of the material to the study of the industries concerned. The following numbers appear in the series:
9768--5.

Asphalt Shingle and Roofing Industry
Business Furniture
Candy Manufacturing Industry
Carpet and Rug Industry
Cement Industry
Cleaning and Dyeing Trade
Coffee Industry
Copper and Brass Mill Products Industry
Cotton Textile Industry
Electrical Manufacturing Industry
Fertilizer Industry
Funeral Supply Industry
Glass Container Industry
Ice Manufacturing Industry
Knitted Outerwear Industry
Paint, Varnish, and Lacquer, Mfg. Industry
Plumbing Fixtures Industry
Rayon and Synthetic Yarn Producing Industry
Salt Producing Industry

THE COVERAGE

The original, and approved, plan of the Division of Review contemplated resources sufficient (a) to prepare some 1200 histories of codes and NRA units or agencies, (b) to consolidate and index the NRA files containing some 40,000,000 pieces, (c) to engage in extensive field work, (d) to secure much aid from established statistical agencies of government, (e) to assemble a considerable number of experts in various fields, (f) to conduct approximately 25% more studies than are listed above, and (g) to prepare a comprehensive summary report.

Because of reductions made in personnel and in use of outside experts, limitation of access to field work and research agencies, and lack of jurisdiction over files, the projected plan was necessarily curtailed. The most serious curtailments were the omission of the comprehensive summary report; the dropping of certain studies and the reduction in the coverage of other studies; and the abandonment of the consolidation and indexing of the files. Fortunately, there is reason to hope that the files may yet be cared for under other auspices.

Notwithstanding these limitations, if the files are ultimately consolidated and indexed the exploration of the NRA materials will have been sufficient to make them accessible and highly useful. They constitute the largest and richest single body of information concerning the problems and operations of industry ever assembled in any nation.

L. C. Marshall,
Director, Division of Review.

9768—6.